

California Pest Rating for
***Euxesta stigmatias* Loew: Cornsilk fly**
Diptera: Ulidiidae
Pest Rating: B

Comment Period: 02/06/2026-03/23/2026

Initiating Event:

Euxesta stigmatias has not been through the pest rating system. Only two official records from the environment are available from California, and this fly could pose a threat to corn and other vegetables in California. Therefore, a pest rating proposal is needed.

History & Status:

Background: Adult female *Euxesta stigmatias* lays eggs on the surface of a host plant, for example, a corn ear. The hatched larvae feed on host tissues (Nuessly and Capinera, 2005). Larvae are reported to generally drop from the host to pupate in the ground (App, 1938). Host plants for which life history information supporting host status was found include corn and carrot. This fly is also reported from sugarcane, guava, *Eugenia* sp., orange, and banana, although it is not known if these reports reflect the fly feeding on healthy plant tissue (App, 1938). Many Ulidiidae are saprophagous and so a mere association of a species with a plant should not be taken as evidence of feeding on healthy plant tissue.

Euxesta stigmatias is considered a serious pest, especially of corn, e.g., in Florida (Goyal et al., 2011). Larvae feed on and hollow out kernels, and there can be hundreds of larvae in a single ear of corn. A rot is often associated with this damage (see Uncertainty, below) (App, 1938). Damage to corn can result in a field being rejected for the fresh market (Nuessly and Capinera, 2005).

In Brazil, *E. stigmatias* is reported to damage root crowns of carrots, resulting in the death of plants (França and Vecchia,1986).

Worldwide Distribution: *Euxesta stigmatias* is reported from: **Caribbean:** Bahamas, Barbados, Cuba, Dominica, Dominican Republic, Jamaica, Puerto Rico; **Central America:** Panama; **North America:** Mexico, United States (Florida); **South America:** Bolivia, Brazil, Paraguay, Perú (App, 1938; França and Vecchia,1986; Goyal et al., 2011; Nuessley and Capinera, 2005).

Official Control: *Euxesta stigmatias* is not known to be under official control.

California Distribution: *Euxesta stigmatias* has been found on corn in California, in Riverside County in 1996 and Merced County in 2000 (California Department of Food and Agriculture).

California Interceptions: *Euxesta stigmatias* is occasionally intercepted on corn from Mexico (California Department of Food and Agriculture).

The risk *Euxesta stigmatias* poses to California is evaluated below.

Consequences of Introduction:

1) **Climate/Host Interaction:** *Euxesta stigmatias* feeds on corn, carrots, and likely other plants. Host plants are presumed to be widespread in California. Climate may be more limiting. This fly appears to primarily be tropical or subtropical. It may only be able to establish in warmer parts of California. Therefore, this fly 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:** Although it is generally considered a pest of corn, *Euxesta stigmatias* also feeds on carrot and there are additional reported hosts as well. 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:** *Euxesta stigmatias* could be moved with infested plant material, including corn, and it can 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.** *Euxesta stigmatias* is considered a serious pest of corn. It is also a pest of carrots and likely other crops. Therefore, it receives a **Medium (2)** in this category.

Economic Impact: A, 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: Medium

– 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.** *Euxesta stigmatias* could impact carrots and perhaps other plants grown in gardens in California. Therefore, it receives a **Medium (2)** in this category.

Evaluate the environmental impact of the pest on California using the criteria below.

Environmental Impact: 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: Medium (2)

– 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 *Euxesta stigmatias*: Medium (11)

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:** *Euxesta stigmatias* has been found in Merced and Riverside 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 the introduction score minus the post-entry distribution and survey information score: Medium (10)

Uncertainty:

There is a great deal of uncertainty regarding this proposal. It is possible that *Euxesta stigmatias* feeds primarily on plant tissue that has been compromised through prior physical damage or infection, e.g., with fungus. The difficulty in identifying larvae casts some doubt on host records besides corn. This fly could be more widely established in California than is reflected in the two reports from Merced and Riverside counties. Alternatively, it may no longer be present at these two localities. This fly may not be capable of widespread establishment and/or impacts in the state if, for example, the climate is generally unsuitable or the existing management practices in California corn prevent significant impacts by this pest.

Conclusion and Rating Justification:

Euxesta stigmatias is a fly that poses a threat to California corn and other crops. It has been found in the state but only in two distant situations. There is uncertainty regarding the persistence of this fly in California. For these reasons, a “B” rating is justified.

References:

App, B. A. 1938. *Euxesta stigmatias* Loew, an otitid fly infesting ear corn in Puerto Rico. The Journal of Agriculture of the University of Puerto Rico 22:181-187.

California Department of Food and Agriculture. Pest and damage record database. Accessed January 6, 2026:

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

França, F. H., and Vecchia, P. T. D. 1986. Danos causados por *Euxesta stigmatias* em raízes de cenoura destinadas a produção de semente. Pesquisa Agropecuaria Brasileira 21:789-791

Goyal, G., Nuessly, G. S., Seal, D. R., Capinera, J. L., Steck, G. J., and Boote, K. J. 2011. Distribution of picture-winged flies (Diptera: Ulidiidae) infesting corn in Florida. Florida Entomologist 94:35-47.

Nuessly, G. S., and Capinera, J. L. 2005. Cornsilk fly (suggested common name), *Euxesta stigmatias* Loew (Insects: Diptera: Otitidae). Accessed January 5, 2026: <https://edis.ifas.ufl.edu/publication/IN381>

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***Comment Period: 02/06/2026-03/23/2026**

***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.

Pest Rating: B