CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE

California Pest Rating Proposal

Heliococcus summervillei Brookes: Summerville's mealybug

Hemiptera: Pseudococcidae

Current Rating: Q

Proposed Rating: A

Comment Period: 12/04/2025 – 01/18/2026

Initiating Event:

Heliococcus summervillei, currently rated Q, is established in Texas and could be present on plant material entering California. Therefore, a pest rating proposal is needed.

History & Status:

Background: *Heliococcus summervillei* is apparently limited to plants in the families Cyperaceae and Poaceae. Reported hosts include *Bracharia ruziziensis*, *Cenchrus ciliatus*, *Digitaria milanjiana*, *Oryza sativa* (rice), *Paspalum dilatatum*, *Saccharum* sp. (sugarcane), and *Urochloa mosambicensis* (Brinon et al., 2004; Brookes, 1978; García Morales et al., 2016; Hauxwell, 2022; Xu et al., 2024). This mealybug can be found underground, feeding on roots. It has been reported to overwinter at depths reaching 0.8 meter (Hauxwell, 2018). Development is reported to take approximately three to six weeks (Hauxwell, 2022).

Dieback (large-scale death of grass) of pastures in Australia was reported to be primarily caused by *H. summervillei*, and this mealybug was found to cause dieback symptoms on the grass *Cenchrus ciliatus* in the laboratory (Buck et al., 2025; Hauxwell, 2022). Pasture dieback impacts the Australian beef, dairy, and sheep industries (Buck et al., 2025). *Heliococcus summervillei* has established in Texas, in

the United States, and pasture dieback has been reported in pastures and hay fields there (described as patches of dead grass and entire desiccated fields) (Biles et al., 2025).

Although rice is a reported host of this mealybug, information was not found regarding impacts to that crop.

In New Caledonia, Brinon et al. (2004) observed, but could not explain, a decrease in abundance over five years to the point at which the mealybug would appear to be locally extinct.

Worldwide Distribution: **Asia:** India, Pakistan; **North America:** United States (Texas); **Oceania:** Australia, New Caledonia (Biles et al., 2025; Brinon et al., 2004; Brookes, 1978; García Morales et al., 2016).

Official Control: *Heliococcus summervillei* is not known to be under official control.

California Distribution: *Heliococcus summervillei* is not known to be present in California.

California Interceptions: *Heliococcus summervillei* has not been intercepted in California.

The risk *Heliococcus summervillei* poses to California is evaluated below.

Consequences of Introduction:

1) **Climate/Host Interaction:** *Heliococcus summervillei* feeds on a variety of grasses. Suitable host plants are probably present across the state of California. The known distribution of this mealybug indicates that it can tolerate temperate climates. Therefore, this mealybug 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:** The reported hosts of *Heliococcus summervillei* are limited to two plant families. 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:** *Heliococcus summervillei* develops rapidly, and it seems likely that there are multiple generations per year. It may also be moved with infested plants. 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**. Pastures are critical to livestock production in California. Dairy products, cattle, and calves are worth over 12 billion dollars annually in the state. If *H*. *summervillei* became established in the state, it could cause dieback in the pastures that those industries depend on, increasing production costs and reducing yield. Impacts to rice may be possible, but information was not found to support this. 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**. Although impacts to the environment have not been reported for *H. summervillei*, it is possible that native grasses could be impacted by this mealybug. Lawns could also be impacted, and treatments could be triggered. Therefore, *H. summervillei* receives a **High (3)** in this category.

Environmental Impact: A, 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 *Heliococcus summervillei*: Medium (12)

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:** *Heliococcus summervillei* is not known to be 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: Medium (12)

Uncertainty:

There is low uncertainty regarding the presence of this mealybug in California. The reported damage is significant and appears unlikely to go unnoticed. There is significant uncertainty regarding the potential impacts to native grasses and regarding long-term impacts to pastures in the state, the latter because of the extreme drop in abundance reported for this mealybug in New Caledonia. There is significant uncertainty regarding potential impacts to rice. This plant is listed a s a host of this mealybug, but information regarding impacts was not found.

Conclusion and Rating Justification:

Heliococcus summervillei is a mealybug that is reported to cause severe impacts to pasture grasses. This mealybug poses a significant threat to California's agriculture and environment and it is not known to be present in the state. For these reasons, an "A" rating is justified.

References:

Biles, S., Sekula, D., Santiago-González, J., Xiong, C., and Kerns, D. 2025. The pasture mealybug: A new invasive pest of pastures and hayfields in Texas. Texas A&M AgriLife Extension. Accessed October 28, 2025:
https://agrilifeextension.tamu.edu/pasture-mealybug/

Brinon, L., Matile-Ferrero, D., and Chazeau, J. 2004. Extension et régression d'une Cochenille nuisible aux Graminées, introduite en Nouvelle-Calédonie, *Heliococcus summervillei* Brookes (Hemiptera, Pseudococcidae). Bulletin de la Société entomologique de France 109:425-428.

Brookes, H. M. 1978. A new species of *Heliococcus* Šulc from Australia and Pakistan and a redescription of *Heliococcus glacialis* (Newstead) comb. n. (Homoptera: Pseudococcidae). Journal of the Australian Entomological Society 17:241-245.

Buck, S. R., Hopkins, K. C., and Shadur, P. G. 2025. 2025 situational analysis of pasture dieback in eastern Australia. Proceedings of the 12th International Rangeland Congress:2066-2070.

García Morales, M., Denno, B.D., Miller, D.R., Miller, G.L., Ben-Dov, Y., and N.B. Hardy. 2016. ScaleNet: A literature-based model of scale insect biology and systematics. Accessed October 28, 2025:
http://scalenet.info

Hauxwell, C. 2018. Mealybugs and pasture dieback: Technical note. Queensland University of Technology. Accessed October 28, 2025:
https://eprints.qut.edu.au/233438/

Hauxwell, C. 2022. Biology of pasture mealybug and identification of natural enemies. Meat and Livestock Australia Limited.

Xu, H., Humpal, J. A., Wilson, B. A. L., Ash, G. J., and Powell, K. S. 2024. Mealybug Population Dynamics: A Comparative Analysis of Sampling Methods for *Saccharicoccus sacchari* and *Heliococcus summervillei* in Sugarcane (*Saccharum* sp. Hybrids). Insects https://doi.org/10.3390/insects15070492

Responsible Party:

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***Comment Period: 12/04/2025 – 01/18/2026**

***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.

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: A