CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE

California Pest Rating Profile for

Phaeotrichoconis crotalariae (M.A. Salam & P.N. Rao) Subram. (1956)
Leaf spot of palms

Pest Rating: B

Domain: Eukaryota, Kingdom: Fungi,
Phylum: Ascomycota, Subphylum: Pezizomycotina

Comment Period: 03/26/2026 through 05/10/2026

Initiating Event:

In 2019, San Diego County agricultural inspectors sampled two shipments of majesty palm (*Ravenea rivularis*) nursery stock with leaf spots from Miami-Dade County, Florida. Plant pathologists Suzanne Rooney-Latham and Albre Brown from the California Department of Food and Agriculture (CDFA) diagnosed *Phaeotrichoconis crotalariae* by morphology. This is a known leafspot pathogen on many hosts, and with many records from Florida. There were no reports on this host or any host in California, and it was given a temporary Q rating. This pathogen has not been through the pest rating process. The risk to California from *Phaeotrichoconis crotalariae* is described herein, and a permanent rating is proposed.

History & Status:

Background: The genus *Phaeotrichoconis* was proposed by Subramanian (1956) after a revision of *Trichoconis crotalariae* (Salam and Rao, 1954). The pathogen was originally described on leaves of *Crotalaria verrucosa* (blue rattlepod). The new genus was described as an anamorphic dematiaceous fungus (asexual with melanin in its cell walls) with phragmosporic acrogenous brown elongated fusiform conidia with a long appendix. It has been reported to be a pathogen and endophyte of plants (Lima et al., 2012), and as the cause of mycotic keratitis in rabbits (Shukla et al., 1989).

Hosts: Carthamus tinctorius (safflower), *Caryota mitis* (clustering fishtail palm), *Chamaedorea elegans* (parlor palm), *Chrysalidocarpus lutescens* (areca palm), *Citrullus vulgaris* (watermelon), *Cleome spinosa* (spider flower), *Copernicia prunifera* (carnauba palm), *Crotalaria verrucosa* (blue rattlepod), *Curcuma aromatica* (wild turmeric), *Cyperus rotundus* (purple nutsedge), *Eichhornia crassipes* (water hyacinth), *Elaeis guineensis* (African oil palm), *Eleocharis cellulosa* (Gulf coast spikerush), *Eschscholzia californica* (California poppy), *Eucalyptus tereticornis* (forest red gum), *Gomphrena globosa* (globe amaranth),

Gronophyllum sp. (Gronophyllum palm), *Mangifera indica* (mango), *Oryza sativa* (rice), *Pentas lanceolata* (Egyptian starcluster), *Phaseolus vulgaris* (common bean), *Rhapis excelsa* (lady palm), *Saccharum officinarum* (sugarcane), *Scirpus validus* (softstem bulrush), *Solanum lycopersicum* (tomato), *Strelitzia reginae* (bird of paradise), *Tagetes* sp. (marigold) *Theobroma cacao* (cacao), *Trichosanthes cucumerina* (snake gourd), *Vitis labrusca* (fox grape), *Zea mays* (corn), and *Zingiber officinale* (ginger) (Farr and Rossman, 2026; CABI, 2026; Lima et al., 2012).

Symptoms: Symptoms typically include small reddish-brown to black elliptical, circular, or irregular necrotic spots on leaves and petioles, often surrounded by a yellow (chlorotic) halo. The disease first appears as 1–4 mm reddish-brown to black elliptical spots, often appearing on leaf pinnae and petioles on palms. This pathogen often occurs with others including *Drechslera setariae* and *Exserohilum rostratum* as part of a broader complex of diseases (Chase, 1982). It can be asymptomatic on grape (Lima, 2012).

Transmission: The disease is spread when multicelled asexual conidia are blown or water splashed onto healthy foliage. Dark colored sclerotia, which are long-term survival structures, have been observed. Long-distance spread is possible with infected nursery stock.

Damage Potential: Even mild infections cause foliar imperfections, and the tolerance for this is very low on foliage plants. There are no curative treatments once the spots are observed. Under high disease pressure, defoliation has been observed (Chase, 1982).

Worldwide Distribution: *Phaeotrichoconis crotalariae* has a pantropical distribution. Asia: *Brunei Darussalam, India, Malaysia, Myanmar, Sri Lanka, Taiwan, Thailand*. North America: *Cuba, United States* (Florida). Oceana: *Australia*. South America: *Brazil* (Farr and Rossman, 2026; Old et al., 2000).

Official Control*: Phaeotrichoconis crotalariae* is not under official control (USDA PCIT-2026).

California Distribution: None

California Interceptions: There have been two interceptions on palm nursery stock from Florida. See initiating events.

The risk that *Phaeotrichoconis crotalariae* would pose to California is evaluated below.

Consequences of Introduction:

1) **Climate/Host Interaction:** This pathogen requires humid, wet, rainy weather for conidia to infect host plants. This environmental requirement may limit the ability of the pathogen to fully establish and spread under dry field conditions in California. Limited regions with conducive climates within California could enable the pathogen to establish. In particular, host plants grown under conducive climate conditions in nurseries are at risk.

Evaluate if the pest would have suitable hosts and climate to establish in California.

Score: **2**

- Low (1) Not likely to establish in California; or likely to establish in very limited areas.
- **Medium (2) may be able to be established in a larger but limited part of California.**
- High (3) likely to establish a widespread distribution in California.

2) **Known Pest Host Range:** This pathogen has a large host range, including plants from many families.

Evaluate the host range of the pest.

Score: 3

- 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 Potential:** This pathogen uses asexual spores to reproduce. It is not known to be seed-borne.

Evaluate the natural and artificial dispersal potential of the pest.

Score: 2

- 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:** Any leaf imperfections result in significant economic damage to foliage plants.

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

Economic Impact: B

A. The pest could lower crop yield.
B. The pest could lower crop value (including increasing crop production costs).
C. The pest could trigger the loss of markets (including 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: **1**

- **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:**

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

Most of the hosts are ornamentals.

Environmental Impact:

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: 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 *Phaeotrichoconis crotalariae:* Medium

Add up the total score and include it here. **10**
-Low = 5-8 points
-Medium = 9-12 points
-High = 13-15 points

6) **Post-Entry Distribution and Survey Information**: Evaluate the known distribution in California. Only official records identified by a taxonomic expert and supported by voucher specimens deposited in natural history collections should be considered. Pest incursions that have been eradicated, are under eradication or have been delimited with no further detections should not be included.

Evaluation is 'not established'.

Score: 0

-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.

7) **The final score is** the consequences of the introduction score minus the post-entry distribution and survey information score: (Score)

Final Score: *Score of Consequences of Introduction – Score of Post Entry Distribution and Survey Information* ***= 10***

Uncertainty:

This pathogen often co-occurs with others with a similar lifestyle and damage potential. It can be difficult to evaluate the damage potential of each. It is possible that records of this disease in the environment, as opposed to nurseries, would qualify it for a C-rating in the future.

Conclusion and Rating Justification:

Based on the evidence provided above, the proposed rating for ***Phaeotrichoconis crotalariae*** **is B.**

References:

CABI Compendium 2026. *Phaeotrichoconis crotalariae*. https://doi.org/10.1079/cabicompendium.40690 accessed 3/4/26

Chase, A. R. 1982. Dematiaceous leaf spots of *Chrysalidocarpus lutescens* and other palms in Florida. Plant Disease. 66:697-699.

Farr, D.F., and Rossman, A.Y. Fungal Databases, U.S. National Fungus Collections, ARS, USDA. *Phaeotrichoconis crotalariae*. Retrieved 3/3/2026, from https://nt.ars-grin.gov/fungaldatabases/

Lima, T.E.F.D., Bezerra, J.L., and Cavalcanti, M.A.D.Q. 2012. *Phaeotrichoconis crotalariae*, endophytic on Vitis labrusca in Brazil. Mycotaxon, 120(1), pp.291-294.

Old, K.M., See, L.S., Sharma, J.K. and Yuan, Z.Q., 2000. A manual of diseases of tropical acacias in Australia, South-East Asia and India. CIFOR.

Salam, M. A. and Rao, P.N. 1954. A new species of *Trichoconis* on *Crotalaria verrucosa* L. from. Hyderabad-Dn. Journal of Indian Botany Soc. 33, 189-91.

Shukla, P.K., Jain, M., Lal, B., Agrawal, P.K. and Srivastava, O.P., 1989. Mycotic Keratitis Caused by *Phaeotrichoconis crotalariae*. New Report* Mykotische Keratitis durch *Phaeotrichoconis crotalariae*. Ein Erstbericht. Mycoses, 32(5), pp.230-232.

Subramanian, C.V., 1956. *Phaeotrichoconis*, a new genus of the Dematiaceae. In Proceedings: Indian Academy of Sciences (Vol. 44, No. 1, pp. 1-2). New Delhi: Springer India.

USDA Phytosanitary Certificate Issuance and Tracking System, Phytosanitary Export Database (PExD) Harmful Organisms Database Report. *Phaeotrichoconis crotalariae*. Accessed 3/4/2026.

Responsible Party:

Heather J. Martin, Primary Plant Pathologist/Nematologist, CDFA/PHPPS ECOPERS, 1220 N St Rm 221, Sacramento, CA 95814 Phone: (916) 654-1017, permits[@]cdfa.ca.gov.

***Comment Period: 03/26/2026 through 05/10/2026**

***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.

Pest Rating: B
