

California Pest Rating Profile for

Ageratina adenophora (Spreng.) R. M. King and H. Rob.: croftonweed, thoroughwort, sticky
snakeroot, Family Asteraceae tribe Eupatorieae

Pest Rating: B

Synonym: *Eupatorium adenophorum* Spreng., *E. glandulosum* Michx.

Comment Period: **04/16/2021 through 05/31/2021**

Initiating Event:

This species has been rated Z by CDFA and is a Federal noxious weed species, but has not previously undergone the pest rating proposal process.

History & Status:

Background: Croftonweed, *Ageratina adenophora*, is a perennial herb with woody base or a subshrub that can grow up to 2 meters in height (Keil, 2012; Nesom, 2006). The stems are erect, purplish in color when young, and glandular-hairy. The leaves are opposite, ovate-lanceolate to nearly triangular with serrate margin, glandular-hairy and purplish below. The petiole is approximately 1-2.5 cm long and the leaf blade approximately 2-10 cm long. The small discoid heads are approximately 6-7 mm long and borne in flat cymose clusters. The involucre of the head and subtending peduncle are densely glandular-hairy. The disc corollas are white or pink-tinged. The one-seeded brownish to black cypsela fruits are approximately 1.5-2 mm in length, glabrous, with five angles and ribs, and bear an easily detached pappus of slender, whitish, minutely barbed bristles approximately 2-4 mm in length.

In California the species occurs in disturbed areas, coastal canyons, riparian areas, scrub, and montane hillsides with adequate permanent water or fog drip (CalIPC, 2021: CCH, 2021). The species has also sometimes been cultivated as an ornamental, but can be seriously invasive in mild climates (Scher et al., 2015; Queensland Government, 2021).

Worldwide Distribution: Croftonweed is native to southern Mexico and naturalized in portions of Africa, central and southern Europe, Macaronesia (Cape Verde, Azores, Madeira), southern and

eastern Asia, Australasia (New Guinea, Australia, Tasmania, New Zealand), French Polynesia, Fiji, Hawaii, and California (Scher et al., 2015; USDA/GRIN, 2021). It is also adventive in parts of Belgium, Germany, and Poland.

Official Control: *Ageratina adenophora* is listed as a Federal noxious weed in the United States and is thus prohibited from import or interstate commerce unless under permit. It is listed as a noxious weed by Alabama, Florida, Hawaii, Minnesota, North Carolina, and Vermont, as a prohibited weed in Massachusetts, and as a plant pest in South Carolina (USDA PLANTS database, 2021). It is a category 1 plant prohibited from planting or commerce in South Africa and a listed noxious weed in New Zealand. The species is listed a harmful weed species in phytosanitary import permitting by Honduras and New Zealand (USDA PCIT database). In Australia it is a prohibited weed in Western Australia and a locally controlled weed in New South Wales (Queensland Government, 2021). The species is a U.S. Federal noxious weed seed and is also a prohibited noxious weed seed in Hawaii (USDA/AMS, 2021).

California Distribution: *Ageratina adenophora* is found as a naturalized plant in coastal and near coastal areas of California from Marin County south to San Diego County and in the Coast and Transverse Ranges of southern California in areas with adequate permanent water. It is documented from vouchered specimens in the Consortium of California Herbaria database (CCH, 2021) from a significant number of populations in the coastal and near coastal counties from southern California north to the San Francisco Bay area (San Diego, Orange, Riverside, San Bernardino, Los Angeles, Ventura, Santa Barbara, San Luis Obispo, Monterey, Santa Cruz, San Francisco, Alameda, Contra Costa, and Marin counties). The species was collected as a naturalized plant in Santa Barbara County in 1925 and in scattered localities in Alameda, Santa Cruz, Monterey, Los Angeles and San Diego counties by the 1930's (CCH, 2021). A few additional recent reports from border areas of San Mateo and Santa Clara counties are shown in the Calflora database (Calflora, 2021).

California Interceptions:

A seed sample of the species was intercepted in 2009 in a shipment from Hawaii and submitted to the CDFA Plant Pest Diagnostics Branch for identification (CDFA/PDR, 2021).

The risk *Ageratina adenophora* would pose to California is evaluated below.

Consequences of Introduction:

- 1) Climate/Host Interaction:** 1) Climate/Host Interaction: The species is native to southern Mexico, with a largely subtropical climate, and thus is likely to be limited to milder climate areas of southern to north-central California. The species is naturalized in coastal areas of California in areas subject to coastal fog and in coastal and near coastal montane areas of southern California with permanent water sources in the Coast and Transverse Ranges, where it usually occurs at altitudes below 1000 meters
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(CCH, 2021; Fuller and McClintock, 1986; Keil, 2012). Therefore, *Ageratina adenophora* receives a **Medium (2)** in this category.

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 establish in a larger but limited part of California.**
- High (3) likely to establish a widespread distribution in California.

- 2) Known Pest Host Range:** Risk is **High (3)** as *Ageratina adenophora* does not require any one host, but grows wherever ecological conditions are favorable.

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 Dispersal Potential:** *Ageratina adenophora* produces abundant wind-dispersed propagules and thus has high reproductive and dispersal potential in the areas in which it is climatically suited. The plant is reported to reproduce by asexual seeds (Keil, 2012) and may produce up to 10,000 seeds per plant (CalIPC, 2021). Longer distance dispersal can occur by shipment for ornamental purposes, on or in vehicles, or as seed contaminant in soil or commercial seed (CalIPC, 2021). Therefore, the species receives a **High (3)** in this category.

Evaluate the natural and artificial dispersal potential of the pest.

Score: 3

- 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:** *Ageratina adenophora* has sometimes been planted in various parts of the world as an ornamental plant, but this is now strongly discouraged since the plant can be highly invasive in coastal areas with suitable climate regimes (CalIPC, 2021; Queensland Government, 2021). It can be very invasive in pasturelands in appropriate climatic conditions, as seen in Australia and Hawaii, which has led to the species being designated as a U.S. Federal noxious weed (Scher et al., 2015). The foliage of the plant is toxic to livestock but apparently unpalatable to cattle. Horses are more likely to consume the foliage, and serious or fatal respiratory illness in horses is reported from Australia and Hawaii, with effects accumulating over a period of months when a high enough amount of leaves is consumed (Everist, 1981; Fuller and McClintock, 1986). The species receives a **High (3)** in this category.
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Evaluate the economic impact of the pest to California using the criteria below.

Economic Impact: ABDF

- 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: 3

- 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:** *Ageratina adenophora* can be highly invasive in coastal and low-elevation montane areas and in disturbed habitats in coastal counties of California, and as a perennial subshrub with a high reproductive rate can exclude vulnerable native plants in areas of infestation. Therefore, it receives a **High (3)** in this category.

Environmental Impact: ABCD

- 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:

- 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 *Ageratina adenophora*: High (14)

Add up the total score and include it here.

- Low = 5-8 points
 - Medium = 9-12 points
 - High = 13-15 points**
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- 6) **Post Entry Distribution and Survey Information:** This plant is relatively widely distributed in coastal areas of California but subject to further spread in the absence of control. It receives a score of **Medium (2)** in this category.

Score: 2

-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 introduction score minus the post entry distribution and survey information score:

Final Score: *Score of Consequences of Introduction – Score of Post Entry Distribution and Survey Information = Medium (14-2=12)*

Uncertainty:

The species has been present in coastal California for many decades, so there is little uncertainty.

Conclusion and Rating Justification:

Ageratina adenophora is a perennial subshrub species native to southern Mexico, and widely naturalized in warmer coastal areas of the world. It has in the past been cultivated as an ornamental shrub, but can be highly invasive in coastal and near-coastal montane areas, and has a very high reproductive potential. The species is toxic but unpalatable to cattle and can be fatal to horses if enough foliage is consumed over time. A rating of “B” is recommended.

References:

California Department of Food and Agriculture. Pest and Damage Record database (PDR). Accessed March 5, 2021.

Calflora. 2021. Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals. Accessed March 5, 2021.

<https://www.calflora.org//>

California Invasive Plant Council (CalIPC). *Ageratina adenophora* Profile. Accessed March 9, 2021: <https://www.cal-ipc.org/plants/profile/ageratina-adenophora-profile/>

Consortium of California Herbaria (CCH). 2021. Accessed March 5, 2021: <http://ucjeps.berkeley.edu/consortium>

Everist, S. L. 1981. Poisonous Plants of Australia, ed. 2. Angus and Robertson, Sydney, Australia.

Fuller, T.C., and E. McClintock. 1986. Poisonous Plants of California. University of California Press, Berkeley, California.

Keil, D.J. 2012. *Ageratina adenophora* in Jepson Manual Project (eds.), Jepson eflora. Accessed March 9, 2021: https://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=735

Nesom, G.L. 2006. *Ageratina* Spach. Pp. 547-553 in Flora of North America Editorial Committee (eds.), Flora of North America North of Mexico, Vol. 21, Magnoliophyta: Asteridae (in part): Asteraceae, part 3. Oxford University Press, New York, NY.

Queensland Government. 2021. Weeds of Australia - Biosecurity Queensland Edition Fact Sheet. *Ageratina adenophora*. Accessed March 5, 2021 https://keyserver.lucidcentral.org/weeds/data/media/Html/ageratina_adenophora.htm

Scher, J.L., Walters, D.S., and Redford, A.J. 2015. Federal Noxious Weed Disseminules of the United States. Edition 2. Accessed March 9, 2021: <http://idtools.org/id/fnw/>

United States Department of Agriculture (USDA), Agricultural Marketing Service. (AMS). 2021. State Noxious-Weed Seed Requirements Recognized in the Administration of the Federal Seed Act. Accessed March 9, 2021: <https://www.ams.usda.gov/rules-regulations/fsa>

United States Department of Agriculture (USDA), Agricultural Research Service. National Plant Germplasm System. Germplasm Resources Information Network (GRIN). 2021. Accessed March 5, 2021. <https://npgsweb.ars-grin.gov/gringlobal/taxon/taxonomydetail?id=316409>

United States Department of Agriculture (USDA) Natural Resources Conservation Service. PLANTS database. Accessed March 5, 2021: <https://plants.sc.egov.usda.gov>

USDA PCIT (Phytosanitary Certificate Issuance and Tracking System) Phytosanitary Export Database. 2021. Accessed March 5, 2021: <https://pcit.aphis.usda.gov/>

Responsible Party:

Robert Price, Primary Botanist, California Department of Food and Agriculture, 3294 Meadowview Rd., Sacramento, CA 95832. Phone: 916-738-6700, [permits\[@\]cdfa.ca.gov](mailto:permits[@]cdfa.ca.gov).

***Comment Period: 04/16/2021 through 05/31/2021**

***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.
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- ❖ 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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Pest Rating: B
