

## California Pest Rating Profile for

*Achnatherum brachychaetum* (Godr.) Barkworth (punagrass)

Family: Poaceae

Pest Rating: B

Seed Rating: P

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**Comment Period: 07/31/2024 through 09/14/2024**

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### **Initiating Event:**

Punagrass, *Achnatherum brachychaetum*, has been assigned a Q-rating by the California Department of Food and Agriculture (CDFA), Plant Health and Pest Prevention Services. Per Title 3, California Code of Regulations (CCR), Section 3162, this pest rating proposal is required to support a permanent pest rating for punagrass.

### **History & Status:**

#### **General Description**

Punagrass is a perennial bunchgrass with fine leaves. It is a densely tufted perennial, with shallow roots and erect stems to 1 m tall (Baldwin et al., 2012). Foliage is tough, unpalatable to livestock, and present nearly year-round. Punagrass is often associated with alfalfa fields. The dense clumps can mechanically interfere with mowing. Because it grows faster than alfalfa, infestations are easier to detect one to two weeks after cutting (Bugwoodi, 2024). It was introduced to California from Argentina (Baldwin et al., 2012).

#### **Worldwide Distribution**

Punagrass is native to Argentina and Uruguay (Caro, 1966). It is introduced in Australia, California, France, and Spain (Invasive Plant Atlas of the United States, 2024).

#### **Official Control**

Punagrass is listed as a noxious weed in New South Wales, Australia (Bugwoodi, 2024). Punagrass is listed on CCR Section 4500 as a noxious weed defined by California FAC Section 5004. The Department is mandated by California FAC, Division 1, Chapter 3, Section 403 to prevent the introduction and spread of noxious weeds. Punagrass is listed as a prohibited noxious weed seed in California defined by California FAC Section 52258 and has zero tolerance for shipments within and to California.

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### **California Distribution**

In California, punagrass is known to be from Alameda, Contra Costa, Fresno, San Benito, San Joaquin, San Luis Obispo, Santa Barbara, and Ventura Counties (CalFlora, 2024; CCH2, 2024).

### **California Interceptions**

Several vouchers have been submitted to CDFA for identification, including those from Alameda, San Joaquin, San Luis Obispo, Santa Barbara, and Ventura Counties (CCH2, 2024).

### **Consequences of Introduction**

- 1) Climate/Host Interaction:** Score is **High (3)** as the plant is naturalized along the coast of California and is fairly difficult to eradicate.
  - 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:** Score is **High (3)**  
Punagrass can occur wherever general ecological conditions exist that are conducive to its survival.
  - 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:** Score is **High (3)**  
Punagrass fruit has long bristle-like glumes that help disperse the plant via animals, vehicles, and wind. Hundreds of fruit are produced per plant each year (Bugwoodi, 2024).
  - 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:** Score is **High (3)** as punagrass will impact grazing land and impacts alfalfa quality and production. Treatment will entail changes in cultural practices and could trigger rejection of products in Australia.
  - 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:

- 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**
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5) **Environmental Impact: Score is High (2)** as in California, punagrass could disrupt natural grassland and scrub communities and reduce populations of rare species in these habitats.

- 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:

- 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 punagrass **High (14)**

Low = 5-8 points

Medium = 9-12 points

**High = 13-15 points**

6) **Post Entry Distribution and Survey Information: Score is High (-3)**

- 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) **Final Score: Medium (14-3=11)**

**Conclusion and Rating Justification:**

Based on the score listed above, the punagrass is a medium risk. A B rating is justified, as it is already known to be from more than six counties; as grasses are hard to identify, it may already be more widespread along the Central Coast of California than is documented.

**Uncertainty:** This plant has been known in CA for about 30 years and introduced colonies have been detected. So, there is low uncertainty.

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## References

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.

Bugwood Wiki [https://wiki.bugwood.org/Achnatherum\\_brachychaetum](https://wiki.bugwood.org/Achnatherum_brachychaetum)  
CABI Digital Library. 2024

<https://www.cabidigitallibrary.org/doi/full/10.1079/cabicompendium.1120182024>. Accessed July 2, 2024

CalFlora: [http://www.calflora.org/cgi-bin/species\\_query.cgi?where-calrecnum=12041](http://www.calflora.org/cgi-bin/species_query.cgi?where-calrecnum=12041) Accessed July 2, 2024

Caro, J.A. (1966) Las especies de *Stipa* (Gramineae) de la región Central Argentina. Kurtziana 3: 7–119.

CCH2 Portal. Consortium of California Herbaria. 2024. <https://www.cch2.org/portal/index.php>. Accessed on July 2, 2024

Global Compendium of Weeds:  
[http://www.hear.org/gcw/species/achnatherum\\_brachychaetum/](http://www.hear.org/gcw/species/achnatherum_brachychaetum/) Accessed July 2, 2024

Invasive Plant Atlas of the United States.  
<https://www.invasiveplantatlas.org/subject.html?sub=5018> Accessed June 14, 2024

USDA Plants. 2024. <https://plants.usda.gov/home/plantProfile?symbol=ACBR5>. Accessed July 2, 2024

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### **\*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).

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### **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.]

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- ❖ 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.
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**Pest Rating: B**

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