Washington Invasive Ranking System

Washington Natural Heritage Program

Alopecurus pratensis (Meadow Foxtail)

Assessed by
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18 November 2024 (WIRS Version 1.5)

Ecological Impact Rank: **Moderate** (63)	Confidence: **Moderate** (50)
Management Difficulty Rank: Moderate (68)	Confidence: Moderate (60)
Biological Characteristics of Invasiveness: High (70)	Confidence: Moderate (42)
Concern Related to Distribution and Abundance: Moderate (67)	Confidence: Moderate (40)

Photo Credit: Steve Matson 2005, used under Creative Commons license (CalPhotos, 2024).

Ranking Notes

None

Legal Listings

Washington State Weed Board: No

Washington Invasive Species Council: No

Section 1: Distribution and Abundance

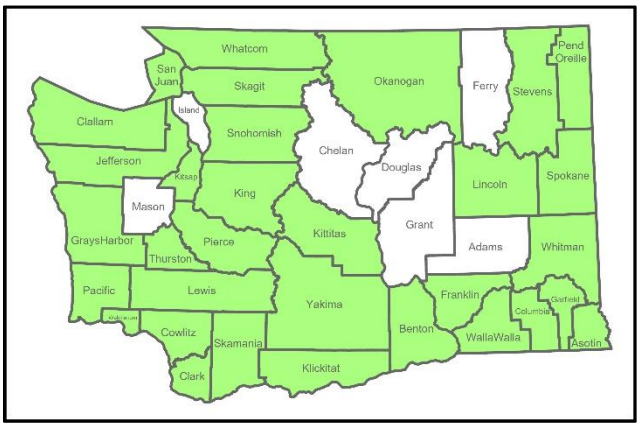

Figure 1. Distribution of counties where *Alopecurus pratensis* has been documented in Washington State (CPNWH, 2023; EDDMapS, 2023; iNaturalist Contributors, 2023).

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

Q1: Current Range Size in Washington

Rating: High

Confidence: Moderate

According to herbarium data and other records, this species occurs in 59% of Washington counties (CPNWH, 2023; EDDMapS, 2023; iNaturalist Contributors, 2023).

Source: Herbarium records and other observations

Q2: Current Trend in Total Range

Rating: Low

Confidence: Low

Potential available habitat suggests that the current trend in range for this species is stable (CPNWH, 2023).

Source: Herbarium records

Q3: Proportion of Potential Range Currently Unoccupied

Rating: Low

Confidence: High

This species could potentially spread to other counties with wetland habitats (CPNWH, 2023).

Source: Herbarium records

Q4: Local Range Expansion or Change in Abundance

Rating: Unknown

Confidence: Not Rated

Alopecurus pratensis is expanding locally at Lacamas Prairie in areas where it was less common, but the assessor cannot speak to changes in local abundance elsewhere in Washington.

Source: Professional expertise

Q5: Diversity of Ecosystems Invaded

Ecosystem types: Grassland & Shrubland, Emergent Open Wetland, Forested Wetland

Rating: Moderate

Confidence: Moderate

Source: Professional expertise

Section 2: Biological Characteristics

Q6: Aggressive Mode of Reproduction

Rating: Yes

Confidence: High

Alopecurus pratensis is an aggressive invader due to its seed production, potential seedbank, rhizomes, and difficulty of eradication.

Source: Professional expertise

Q7: Innate Potential for Long-Distance Dispersal

Rating: Yes

Confidence: Moderate

This species' seeds float and have the potential to be dispersed long distances by water.

Source: Professional expertise

Q8: Potential to be Spread by Human Activities

Rating: Unknown

Confidence: Not Rated

This species could potentially be spread by humans in clothing.

Source: Professional expertise

Q9: Allelopathy

Rating: No

Confidence: Moderate

There is no evidence that this species is allelopathic (AKNHP 2010).

Source: Professional expertise

Q10: Competitive for Limiting Abiotic Factors

Rating: Yes

Confidence: Moderate

Alopecurus pratensis competes for space, light, and nutrients. This species can outcompete native species, especially annuals.

Source: Professional expertise

Q11: Growth Form

Rating: Yes

Confidence: Moderate

May form dense sods & mats (Rutledge & McLendon, 1996; Dzyubenko & Dzyubenko, 2009).

Source: Published research

Q12: Germination Requirements

Rating: Yes

Confidence: High

This species is very adaptable and does not require disturbance to germinate.

Source: Professional expertise

Q13: Invasiveness of Other Plants in Genus

Rating: Yes

Confidence: Moderate

Alopecurus geniculatus (native in Washington) is somewhat invasive in Alaska (AKNHP 2010). *Alopecurus myosuroides* is a listed noxious weed in Washington (NWCB, 2025).

Source: Informal publication, Professional expertise

Q14: Shade Tolerance

Rating: Moderate

Confidence: High

This species has been observed growing in medium shade in ash forests.

Source: Professional expertise

Q15: Disturbance Tolerance

Rating: Unknown

Confidence: Not Rated

This species might respond to high nitrogen input, but response to increased disturbance is unknown.

Source: Professional expertise

Q16: Propagule Persistence

Rating: <5 years

Confidence: Moderate

Grasses tend not to have long seed persistence, but the exact persistence of this species under field conditions is unknown.

Source: Professional expertise

Q17: Palatability

Rating: No, plant is palatable

Confidence: Moderate

Cattle are known to graze this species. *Alopecurus pratensis* was introduced as a pasture grass.

Source: Professional expertise

Section 3: Ecological Impact

Q18: Impact on Ecosystem Abiotic Processes

Abiotic Processes: Light availability, Nutrient dynamics

Rating: Low

Confidence: Moderate

Alopecurus pratensis likely has minimal impact on abiotic processes, though it may be more competitive for soil nitrogen than some native species (Rutledge & McLendon, 1996; Venterink & Güsewell, 2010).

Source: Professional expertise

Q19: Impact on Ecosystem Structure

Rating: Moderate

Confidence: High

This species can convert bunchgrass communities with scattered annuals to rhizomatous grasslands.

Source: Professional expertise

Q20: Impact on Ecosystem Composition

Rating: Moderate

Confidence: Moderate

Occurances of *Alopecurus pratensis* can lead to loss of native bunchgrasses and forbs. It is capable of displacing native species, especially annuals.

Source: Professional expertise

Q21: Impact on Particular Native Species

Rating: Unknown

Confidence: Not Rated

Alopecurus pratensis may shade out some species, particularly annuals.

Source: Professional expertise

Q22: Observed Ability to Invade Undisturbed Ecosystems

Rating: Moderate

Confidence: Low

While the assessor has not observed *Alopecurus pratensis* establishing in undisturbed ecosystems, at Lacamas Prairie this species does appear to be spreading to areas where it was previously uncommon.

However, in Oregon this species has been observed establishing in native-dominated meadows that are maintained by hydrological conditions rather than frequent disturbance (Neugarten & Elseroad, 2006).

Source: Informal publication, Professional expertise

Q23: Observed Ability to Invade Naturally Disturbed Ecosystems

Rating: Yes

Confidence: Moderate

This species persists after flooding and fire.

Source: Professional expertise

Section 4: Management Difficulty

Q24: General Management Difficulty

Rating: High

Confidence: Moderate

Glyphosate can be an effective control, but generally control of this species is difficult due to the volume of seeds produced. Additional mowing/cutting may be necessary to prevent seeding (OSU Rangeland Ecology and Management, 2005).

Source: Informal publication, professional Expertise

Q25: Minimum Time Commitment

Rating: High

Confidence: Moderate

This species may require ongoing management.

Source: Professional expertise

Q26: Impacts of Management on Native Species

Rating: Low

Confidence: Moderate

Impacts on native species depend on control methods used. If one uses spot spraying, non-target kill is relatively low. Boom spraying would result in moderate to high non-target kill.

Source: Professional expertise

Q27: Inaccessibility of Invaded Areas

Rating: Low

Confidence: High

Source: Professional expertise

Q28: Sociopolitical Implications of Management

Rating: Insignificant

Confidence: Moderate

Public objections to herbicide use may present obstacles to management in some areas.

Source: Professional expertise

Additional Comments

None

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