

Washington Invasive Ranking System

Washington Natural Heritage Program

Trifolium pratense (Red Clover)

Assessed by

Regina Johnson (Assistant Natural Areas Ecologist, Westside, Washington Dept. of Natural Resources)
4 December 2024 (WIRS Version 1.5)

Ecological Impact Rank: **Low** (38)

Confidence: **Moderate** (50)

Management Difficulty Rank: Insignificant (16)

Confidence: High (90)

Biological Characteristics of Invasiveness: Low (37)

Confidence: High (75)

Concern Related to Distribution and Abundance: High (56)

Confidence: High (80)

Washington Invasive Species Council: No



Photo Credit: David Giblin 2020, used under Creative Commons license (Burke Herbarium, University of Washington, 2024).

Ranking Notes

Rapid assessment only, based primarily on professional expertise.

Legal Listings

Washington State Weed Board: No

Section 1: Distribution and Abundance

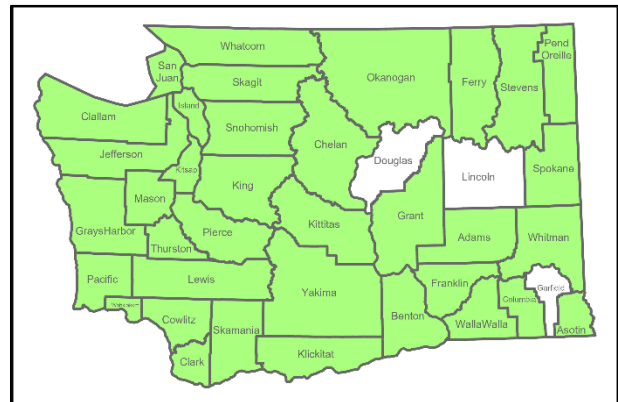


Figure 1. Distribution of counties where *Trifolium pratense* has been documented in Washington State (CPNWH, 2024; EDDMapS, 2024; iNaturalist Community, 2024).

Q1: Current Range Size in Washington

Rating: High

Confidence: High

Trifolium pratense is documented from 92% of counties in Washington State (CPNWH, 2024; EDDMapS, 2024; iNaturalist Community, 2024).

Source: Professional expertise, Herbarium records and other observations

Q2: Current Trend in Total Range

Rating: Low

Confidence: High

Source: Professional expertise

Q3: Proportion of Potential Range Currently Unoccupied

Rating: Low

Confidence: Moderate

This species has likely occupied most of its available habitat.

Source: Professional expertise

Q4: Local Range Expansion or Change in Abundance

Rating: Low

Confidence: Moderate

Source: Professional expertise

Q5: Diversity of Ecosystems Invaded

Ecosystem types: Forest & Woodland, Grassland & Shrubland

Rating: Low

Confidence: High

Source: Professional expertise

Section 2: Biological Characteristics

Q6: Aggressive Mode of Reproduction

Rating: No

Confidence: Moderate

Trifolium pratense generally does not reproduce vegetatively, although there are vegetatively reproductive cultivars (Hyslop et al., 1999).

Source: Professional expertise

Q7: Innate Potential for Long-Distance Dispersal

Rating: No

Confidence: Moderate

Source: Professional expertise

Q8: Potential to be Spread by Human Activities

Rating: Yes

Confidence: Moderate

This species is used for forage, for erosion control, and it's in livestock feed.

Source: Professional expertise

Q9: Allelopathy

Rating: No

Confidence: High

This species is used as a forage plant for pasture mixes, where allelopathy would be a significant drawback.

Source: Professional expertise

Q10: Competitive for Limiting Abiotic Factors

Rating: Yes

Confidence: High

Trifolium pratense is a nitrogen-fixer, like nearly all legumes.

Source: Professional expertise

Q11: Growth Form

Rating: No

Confidence: High

Source: Professional expertise

Q12: Germination Requirements

Rating: No

Confidence: Moderate

Source: Professional expertise

Q13: Invasiveness of Other Plants in Genus

Rating: Yes

Confidence: High

Source: Professional expertise

Q14: Shade Tolerance

Rating: Moderate

Confidence: High

Source: Professional expertise

Q15: Disturbance Tolerance

Rating: No

Confidence: Moderate

Source: Professional expertise

Q16: Propagule Persistence

Rating: <5 years

Confidence: Moderate

Source: Professional expertise

Q17: Palatability

Rating: No, plant is palatable

Confidence: High

This is a forage plant often included in pasture mixes.

Source: Published Research

Section 3: Ecological Impact

Q18: Impact on Ecosystem Abiotic Processes

Abiotic Processes: Nutrient dynamics

Rating: Low

Confidence: Moderate

Prairies are low-nitrogen systems so this species' nitrogen fixing abilities may benefit tall oatgrass, similarly to *Cytisus* species.

Source: Professional expertise

Q19: Impact on Ecosystem Structure

Rating: Low

Confidence: Moderate

Source: Professional expertise

Q20: Impact on Ecosystem Composition

Rating: Low

Confidence: Moderate

Source: Professional expertise

Q21: Impact on Particular Native Species

Rating: Not Rated

Confidence: Not Rated

Source:

Q22: Observed Ability to Invade Undisturbed Ecosystems

Rating: Low

Confidence: Moderate

Source: Professional expertise

Q23: Observed Ability to Invade Naturally Disturbed Ecosystems

Rating: Yes

Confidence: High

Source: Professional expertise

Section 4: Management Difficulty

Q24: General Management Difficulty

Rating: Low

Confidence: High

This species is usually not a priority for control in Washington, though the assessor believes control would be comparatively easy.

Source: Professional expertise

Q25: Minimum Time Commitment

Rating: Insignificant

Confidence: High

Source: Professional expertise

Q26: Impacts of Management on Native Species

Rating: Insignificant

Confidence: High

Source: Professional expertise

Q27: Inaccessibility of Invaded Areas

Rating: Insignificant

Confidence: High

Source: Professional expertise

Q28: Sociopolitical Implications of Management

Rating: Moderate/Low

Confidence: Moderate

Source: Professional expertise

Additional Comments

None

References

Burke Herbarium, University of Washington. 2024.
Burke Herbarium Image Collection.
<https://burkeherbarium.org/imagecollection>.
Accessed: December 17, 2024.

Consortium of Pacific Northwest Herbaria
(CPNWH). 2024. Consortium of Pacific
Northwest Herbaria Specimen Database.
[https://www.pnwherbaria.org/data/search.ph
p](https://www.pnwherbaria.org/data/search.php). Accessed: December 20, 2024.

EDDMapS. 2024. Early Detection & Distribution
Mapping System. The University of Georgia
- Center for Invasive Species and Ecosystem
Health. <http://www.eddmaps.org>. Accessed:
June 17, 2024.

Hyslop M.G., P.D. Kemp, and J. Hodgson. 1999.
Vegetatively reproductive red clovers
(*Trifolium pratense* L.): An overview.
*Proceedings of the New Zealand Grassland
Association*:121–126.

iNaturalist Community. 2024. Research grade
observations from Washington State.
<https://www.inaturalist.org/>. Accessed:
December 24, 2024.

