

How to restore native grasslands in the interior Pacific Northwest

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Weed scientists in Oregon have found that the timing of herbicide application along with reseeded native grasses offers the best recipe for restoring native grasslands while controlling invasive weeds.

Grasslands are a valuable resource for ecosystems, providing soil conservation, food and fiber production, and wildlife habitat. When threatened by invading exotic species, the quality and quantity of forage for wildlife can be reduced, fire frequencies can be altered, soil moisture and nutrients can be depleted, and the costs of land management can increase.

A study in the journal *Invasive Plant Science and Management* evaluated various treatments with five herbicides over a period of 6 years. The experiments were carried out within the Wenaha State Wildlife Area in northeastern Oregon. The location is representative of the grasslands and ecoregion of the interior Pacific Northwest, where an exotic flowering plant, sulfur cinquefoil, is threatening native grasslands.

The study's experiments used two application rates and three application times for five herbicides. In addition, each experiment site had a seeded and unseeded treatment of native [perennial grass](#) seeds. The herbicide picloram provided the best control of sulfur cinquefoil. A one-time application of picloram reduced the abundance of sulfur cinquefoil during the 6-year period.

However, if the goal is to reduce all exotic species and restore [native grasses](#), time is an important ingredient. Timing the application of

herbicides is important so that they do not threaten desired native plants while attacking the invader. In the interior Pacific Northwest, most native species are dormant in the late summer and early autumn, making this the best time to apply herbicides for minimal effect on native plants.

The length of time required to manage invading species is another factor. While an herbicide may make inroads into reducing an exotic species of plant in 2 to 3 years, this does not mean that the native species will once again dominate. The best results were seen when reseeding of native grasses followed [herbicide application](#).

During the first 3 years of this study, the reseeding trial experienced poor success. Growth was slow and the desired plants were small. However, as the evaluation of this program continued, [native plants](#) became successfully established by the sixth year. The seeding of native grasses reduced exotic grass cover by 20 percent.

More information: "Grassland Response to Herbicides and Seeding of Native Grasses 6 Years Posttreatment," *Invasive Plant Science and Management*, [www.wssajournals.org/doi/full/ ... 14/IPSM-D-11-00050.1](http://www.wssajournals.org/doi/full/.../14/IPSM-D-11-00050.1)

Provided by Invasive Plant Science and Management

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