

Integrated Cheatgrass Management Program for Wyoming

Situation:

Cheatgrass, or downy brome, negatively effects at least 40 million hectares in the western United States. The invasive annual weed is reportedly increasing in all Wyoming counties, although it was originally thought that Wyoming's elevation and climate might preclude it from becoming a significant threat to our rangeland systems. Cheatgrass has the potential to transform ecosystems from productive, diverse sagebrush grasslands to fire-prone annual grasslands thereby reducing habitat quality for livestock and wildlife alike in at least three primary ways: (1) increased fire frequency removes big sagebrush from the plant community leading to a decrease in wildlife habitat quality; (2) cheatgrass, as a forage source for livestock, is unpredictable and only available during a narrow time frame which may restrict stocking decisions and reduce income for producers; and (3) once cheatgrass becomes dominant, it is difficult to restore a diverse native plant community to the site. The invasive plant's tendency to thrive in disturbed areas makes it a significant problem on reclamation sites where it competes with newly-seeded plants for nutrients and water. This invasive weed has the potential to either directly or indirectly impact several major contributors to Wyoming's economy: the energy industry, the agricultural industry, and industries related to wildlife viewing or hunting.

A team of scientists and educators in the college, with additional cooperation from Colorado State University, have been building an integrated research and extension program known as the Rocky Mountain Cheatgrass Management Project. The purpose of the program is to strategically address the cheatgrass issue in our region. Wyoming-specific research is investigating a vertically-integrated approach to cheatgrass-disturbed area restoration incorporating assessment of recovery potential, planting competitive desirable plant species, and chemical control options. An additional project seeks to understand the long-term impact of chemical cheatgrass control on the cheatgrass seed bank and on the vegetation and quality of native rangeland habitat. Early results from this work have been presented to Wyoming natural resource managers and agricultural producers in several venues.

Impact:

The short-term impact of this project has been an increased awareness of the issue and how it could potentially impact Wyoming's natural resources. Land managers who have attended the educational events have reported increased basic knowledge regarding the biology and control of cheatgrass. Mid-term impacts will include the development of effective methods for the individual landowner to meet their cheatgrass management goals, along with high-quality training of students in this field. Over the long-term, we hope to reduce the conversion of important grazing lands and wildlife habitat into cheatgrass-dominated annual grasslands to maintain or enhance the natural resource base in Wyoming.

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