Introduction

Objective: Investigate best control methods for bulbous bluegrass while conserving or enhancing desirable vegetation

Hypothesis: Different herbicides will provide varying control of bulbous bluegrass.

BACKGROUND:

Bulbous bluegrass (Poa bulbosa) is an introduced grass from the Eurasian area. It was initially introduced as a cool season turf grass. Due to lack of productivity, marketability, and

"weediness" bulbous bluegrass production ended. More recently bulbous bluegrass has been recognized as invasive grass and is widely distributed throughout the United States. The invasion potential of bulbous bluegrass is cause for concern.



Similar to invasive winter annual grasses, bulbous bluegrass actively grows in the fall, through the winter, and into the spring. It also senesces early in the summer. Bulbous bluegrass is a weak perennial, meaning it survives for more than one year and has variable survivability after that (actual life history is relatively unstudied). Bulbous bluegrass is a short statured bunchgrass with short roots.

REPRODUCTION:

Unlike most grasses bulbous bluegrass generally produces bulbs rather than seeds in the Western United States. However, it is also capable of producing seeds, and sometimes produces both seeds and bulbs on the same inflorescence. In addition to these reproductive capabilities, bulbous bluegrass also produces tillers

and occasionally seeds.

_____ from the base of the adult plant. These tillers Produces <u>bulbs</u> - only grow from the base of an existing adult plant and do not seem to facilitate rhizomatous or stoloniferous growth.

 Due to lack of productivity, marketability, and "weediness" bulbous bluegrass turf production ended.



Similar to invasive winter annual grasses bulbous bluegrass actively grows starting in the fall, through the winter, and into the spring.



HABITAT:

Bulbous bluegrass can grow under a variety of environmental conditions. It can grow over a wide range of soil types and textures and can grow under a wide range of precipitation, anywhere from 12-40".





WHAT WE KNOW:

Very little research has been done on bulbous bluegrass. However, we do know that bulbous bluegrass can create high density patches and even form monoculture mats on the soil surface. Bulbous bluegrass can produce a high amount of bulbs per growing season. Our research shows anywhere from 15-34 million bulbs per m². Additionally, we know that it has a higher competitive ability than some of our desirable perennial plants. Similar to many invasive species bulbous reacts positively to disturbance.



WHAT WE DON"T KNOW

Unfortunately, what we don't know about bulbous bluegrass far outweighs what we do know. While we know the general distribution of this grass we do not know high resolution information of presence vs. absence or the invasion severity where it exists. We can not define interspecific interaction between bulbous bluegrass and surrounding organisms. We do not know the economic impact of this invasive grass or what implications it's presence can have in restoration scenarios. We do not know it's population dynamics and how bulbous bluegrass populations change throughout time. Lastly, and perhaps most importantly for the

land manager, we do not know how to effectively control bulbous bluegrass.

In order to develop appropriate and effective methods for control of bulbous bluegrass we implemented a study to investigate the efficacy of various herbicides for bulbous bluegrass control. Investigate the efficacy of various herbicides for bulbous bluegrass control.

