



The Effect of Discing to Reduce Cheatgrass Densities Following Wildfires

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Wildfires in the Intermountain West are an annual event. The introduction and subsequent invasion of cheatgrass (*Bromus tectorum*) onto millions of acres of rangelands throughout the West has resulted in devastating wildfires. Cheatgrass truncates secondary succession by out competing native perennial grass seedlings for limited moisture and providing a fine textured, early maturing fuel that has increased the frequency of wildfire from an estimated 60-110 years down to 5-10 years in many habitats, resulting in cheatgrass dominated plant communities. The restoration/revegetation of burned habitats throughout the West is a definite uphill battle, but the best known method to successfully suppress cheatgrass is through the establishment of long-lived perennial grasses. Slow burning wildfires in shrub communities are known to burn hot enough for a long enough period of time that the majority of cheatgrass below the canopy is killed, but the interspaces still have cheatgrass visible on the soil surface and in safe site depressions. To reduce this interspace cheatgrass seed bank density we looked at discing the site to bury the seed to a depth that would reduce cheatgrass germination. We investigated seeding over this shrub burned community the first fall following the wildfire without discing the site and compared it to paired discing plots. The discing of the soil significantly decreased the number of germinating cheatgrass seeds in our bioassay efforts, discing = 86.6/m² and undiscid = 300.5/m². Although there was a significant decrease in cheatgrass germination experienced in our soil bioassays, the above ground cheatgrass density the following spring was not significant as the discid plots averaged 7.9 cheatgrass/m² and the undiscid plots averaged 8.5 cheatgrass/m². There was also no significant differences in seeded species establishment in discid versus undiscid plots where crested wheatgrass (*Agropyron cristatum*) experienced the best establishment results with 6.2/m² and 7.6/m² in the discid and undiscid plots, respectfully.

2009. 62nd Society for Range Management Annual Meeting. Paper No. 1030-5.