

Seeded Native Forb and Shrub Establishment on Disturbed Sites in Southwestern Wyoming

Abstract: Restoring native forb and shrub species for wildlife habitat to disturbances is challenging. Our objective was to evaluate native forb and shrub species establishment for restoration of disturbed high elevation sagebrush steppe. In October 2005, on a well-pad disturbance near Pinedale, Wyoming, 23 native forbs species and 16 accessions of 12 native shrub species were drill-seeded in single species plots in a randomized complete block design with four replications. Establishment was evaluated by counting species densities annually from 2007 through 2010 and differences among accessions were analyzed using ANOVA. In general, forb densities were low indicating forb establishment was poor and no differences among species were detected with the exception of fewer *Cleome serrulata* plants (less than one plant per square meter) compared to other species in years 2008 and 2010. The trend over time was decreasing forb density. There were no differences among shrub species or accessions over time. In 2008, 'Wytana' *Atriplex aptera* had the greatest establishment (395 plants/ha) followed by 'Snake River Plains' *Atriplex canescens* (197 plants/ha) and *Grayia spinosa* (110 plants/ha). These densities are satisfactory for wildlife food and cover on this site. Densities of the other shrub accessions were similar to each other and ranged from 101 to 21 plants/ha. Broadcast seeding may have improved the establishment of both forbs and shrubs. Our results suggest shrub cultivars can be used to restore wildlife habitat on disturbed sites. However, the forb results suggest more work needs to be done to develop establishment technologies and seed sources of forb species important for wildlife habitat.