An Overview of the Research and Studies on Diversifying Crested Wheatgrass Seedings

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Crested wheatgrass (*Agropyron cristatum* sensu amplo [L.] Gaertn.) is an introduced, caespitose grass that has been seeded on millions of acres of Western rangelands. In some areas, crested wheatgrass seedings overlap with critical sage-grouse (*Centrocercus urophasianus*; *C. minimus*) habitat, raising the question of how plant diversity might be restored in these closed-plant communities. A three-step process is described to reduce crested wheatgrass competition, introduce desired species, and manage to maintain desired species for long-term use. Crested wheatgrass is a strong competitor with other species and a prolific seed producer. This hinders treatments to reduce its influence and improve conditions for establishment of desirable seeded species. Herbicides, burning, mechanical treatments, livestock grazing, droughts, and combinations of these are effective to varying degrees in reducing crested wheatgrass competition. Once crested wheatgrass competition is reduced, either seed or seedlings can be used to increase diversity in these seedings. Post-establishment management and monitoring are essential components of the strategy to maintain plant diversity into the future.