

## **The Diversification of Crested Wheatgrass Experience**

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In the Canadian prairies, the northern tip of the Northern Great Plains, there are over 1,000,000 acres of crested wheatgrass. A large portion was seeded in the 1930s to stabilize drifting soil. These seeded acres have received very few inputs and productivity has declined. In addition to seeded acres crested wheatgrass has invaded undisturbed native range. Work reported here was done to improve productivity of crested wheatgrass and to determine methods to replace crested wheatgrass with more desirable natives. Realizing the soil was prone to erosion if disturbed, techniques were examined which minimized soil disturbance. Comparison of burning, simulated grazing, suppression by herbicide, and control by herbicide found control was the only method that was effective. The grass species seeded into the sod also was dependant on location. In other work to increase productivity by introducing a legume found that a controlled vegetation strip of a minimum 50 cm was required. Comparison of seeders found that seeders which disturbed the covering of dead vegetation the least were more effective in establishing seedlings. Work is progressing to identify seeded plant communities which resist re-invasion of crested wheatgrass. At present, complete control of the crested wheatgrass works best with seeders which limit the amount of disturbance of dead vegetative cover. Selection of appropriate species for diversification of the crested wheatgrass stands is still being examined.