**Revegetation of Coastal Prairies Dominated by Old World Bluestems With Native Grasses**

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Old World bluestems (OWB) are non-native grasses introduced for livestock forage and soil conservation. OWB are aggressive grasses that invade and out-compete the native flora, degrade wildlife habitat and reduce native plant abundance and diversity. Studies were conducted at the Welder Wildlife Foundation Refuge to determine if OWB dominated coastal prairies can be re-vegetated with native grasses to promote native coastal prairie succession. We compared discing, glyphosate and imazapyr treatments for initial OWB control, followed by broadcast seeding a native grass mixture in late spring and fall. Furthermore, to determine if native grass establishment can be enhanced with pre-emergence herbicide treatments we treated randomly selected 20'x 30' split-plots in each whole plot with glyphosate, imazapyr, or imazapic herbicides, one day after native grass seeding.

- Discing provided the best control of existing OWB. Imazapyr treatments provided the best chemical control of existing OWB in the spring. In the fall, glyphosate and imazapyr provided equivalent chemical control of OWB.
- Pre-emergence application plots of imazapic and imazapyr had higher frequency and canopy cover of native grasses than did pre-emergence glyphosate applications and untreated plots. Of the 4 native grass species planted, slender grama and shortspike windmillgrass established better than plains bristlegrass or Arizona cottontop.
- Our results indicate wildlife habitat can be improved in OWB infested coastal prairies with a combination of disking, broadcast seeding, followed by applications of imazapyr and imazapic herbicides. However, long term studies should be undertaken to quantify the resiliency and persistence of these stands.

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