

A COMPARISON OF HIGH AND LOW DIVERSITY PRAIRIE PLANTINGS

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Abstract: It is becoming increasingly common for restorations to use mixes of over 100 species. This is done to more closely mimic natural prairies. There may be hesitation on the part of managers to plant these high diversity mixes because of the increased cost of obtaining the seeds. The current study compares restorations that were planted with seed mixes that differed in the number of forb species in order to explore the benefits of high diversity planting mixes. Prairie restorations at DeSoto National Wildlife Refuge and Boyer Chute National Wildlife Refuge were sampled between 2003 and 2009 as part of on going monitoring of restored prairies. Restorations ranged in age from 38 to 3 years. Data from 40 fields divide approximately equally between four forb abundances were examined for this study: no forbs, low forbs (≈ 5 species), medium forbs (≈ 30 species), high forbs (≈ 100 species). As expected the high diversity sites had significantly more species present, however, the treatments did not differ in diversity. Grass cover was virtually 100% in all treatments except the high diversity treatments. Relative abundance of forbs was actually lowest in the medium diversity treatments. A confounding factor was that the high and medium forb treatments were all relatively new (generally 3-5 years since planting) while the no and low forb treatments averaged about 20 years old. It would seem that over time forb abundance in low diversity plantings may increase to the levels found in high diversity plantings.