

**EFFECTS OF MOWING ON ABUNDANCE AND PERSISTENCE OF TALLGRASS PRAIRIE FORBS SEEDED INTO AN ESTABLISHED STAND OF PRAIRIE GRASSES: 10 YEARS AFTER SOWING**

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Abstract: In fall 1998, 23 forb species were broadcast seeded into a 25-year old reconstructed stand of warm-season prairie grasses at the University of Northern Iowa in Cedar Falls, Iowa. To determine the effect on forb establishment, mowing treatments were applied in 1999 and 2000 and compared with no-mow controls. Williams et al. (2007) found that frequent mowing the first season increased forb emergence and over-winter survival. In the summer of 2008, the plots were re-sampled to assess the effect of ten years time on forb abundance and diversity. We hypothesized that the forb abundance, richness, and diversity would be greater in plots that were mowed over the no-mow controls. Our results showed that both the number of forb shoots ( $p=0.004$ ) and the number of forb species were significantly greater ( $p<0.001$ ) in mowed plots over no-mow controls. We also found that the number of warm-season grass shoots was significantly greater ( $p=0.026$ ) in no-mow plots. The Simpson diversity index in mowed plots was significantly ( $p=0.002$ ) higher (0.650) than the un-mowed plots (0.243). This study shows that frequent mowing in the first season after sowing novel forb species into an established grassland can have a profound impact on the plant community well into the future; increased forb abundance, increased forb richness and a more diverse plant community.