

Warm-Season Grass Management Trials in Maryland

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In Maryland, thousands of acres have been planted to native warm-season grasses and wildflowers to protect water quality and provide wildlife habitat. However, existing plantings lack species diversity due to the use of low diversity planting mixes and improper management. To improve stand diversity an appropriate selection of wildflower species and management treatments are required. Trials have been conducted at the Norman A. Berg National Plant Materials Center in Beltsville, Maryland in cooperation with NRCS Maryland to determine the optimal methods for renovating warm-season grass stands to increase plant diversity. Treatments included timing of disking (late summer; late fall; early spring), disking intensity (0%; 25%; 50%; 100%), and wildflower seeding rates (none; ½lb PLS/acre; ½lb PLS/acre + 20lb/acre small grain; 4lb PLS/acre wildflower mix). These treatments were tested with a ‘dry’ wildflower mix on a stand of predominantly indiangrass in well-drained soil and a ‘mesic’ wildflower mix on a dense stand of predominantly switchgrass in moderately well-drained soil. Vegetation percent cover and composition were evaluated for three years. The data indicate fall disking more effectively reduced warm-season grass density and better facilitated wildflower establishment and growth. Spring disking appeared ineffective at reducing grass density, which resulted in smaller wildflower plants while having comparable or better germination. Disking reduced indiangrass cover, but not switchgrass and big bluestem, suggesting indiangrass is more susceptible to disking. Some species of wildflower established and persisted better than others. Results have been transferred into technical documents to support conservation planning for USDA Farm Bill programs.

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