

Can Plantings of Warm Season Cover Crops Dominated by Sorghum-Sudangrass Provide Quality Winter Habitat for Ground-Feeding Sparrows if Left Standing in Winter?

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Policymakers in the Northeastern USA are creating more subsidies in support of more diverse plantings of cover crops as part of efforts to lower the carbon footprint of farming. Warm season cover crops are a tool farmers may use to improve agricultural soil health, control weeds without herbicides, and to sequester carbon. Unlike many cover crops that produce very little biomass during the winter months (buckwheat, brassicas, winter rye, winter wheat), stands of summer-planted sorghum-sudangrass have the opportunity to provide quality winter habitat if left unmowed until the following spring. The remaining dry biomass can form dense thickets that may serve as winter roosting sites and windbreaks for birds and residual seeds may be an important supplemental food.

At three different sites in the Hudson Valley, we found that bird abundance was directly related to sorghum seed abundance and that birds significantly reduced the number of seeds in each study plot in three months. Birds in sorghum-sudangrass plots showed less variation in body mass and weight compared to birds in wild unmanaged habitats reflecting the abundance and predictability of sorghum-sudangrass as a source of food. Future studies will examine if birds continue to use such habitats if later spring planting dates reduce the number of available seed heads. This is an important question since sorghum-sudangrass seeds can persist into the next season's crop as a source of volunteer weeds. Is a tradeoff possible whereby farmers can leave sorghum-sudangrass as winter cover for birds, minimize its contribution to the weed seed bank, and provide a carbon benefit to the soil?



