

CONVERTING TALL FESCUE FIELDS TO NATIVE WARM SEASON GRASSES IN KENTUCKY

by

B.E. Washburn and T. G. Barnes¹

Abstract: Tall fescue (*Festuca arundinacea*) fields do not provide quality habitat for grassland wildlife and numerous state and private groups support the conversion of fescue to native warm season grasses. We initiated this study to evaluate the effectiveness of different techniques using Round-Up PROJ or PlateauJ herbicides for eradicating tall fescue and establishing native warm season grasses (NWSG). Ten tall fescue fields were located for study across Kentucky. Controlled burning, herbicide applications, and planting of NWSG were implemented in 0.1 ha treatment plots in spring and fall of 1997. Plant communities resulting from the spring 1997 treatments were described in the fall of 1997. Total vegetative cover (%), bare ground (%), litter (%), and plant cover by species (%) was visually estimated in 10 1-m² sampling quadrats in each treatment plot. Seven of the ten plots were successfully planted to native warm season grasses. Tall fescue coverage was significantly lower ($P < 0.0001$) in spring burn-Round-Up PROJ-plant NWSG treatments (5%) and spring burn-PlateauJ-plant NWSG treatments (2%) than in control (93%) and spring burn only treatment (88%). Total vegetative cover and litter were lower ($P < 0.0001$) and bare ground was higher ($P < 0.0001$) in spring burn-Round-Up PROJ-plant NWSG and spring burn-PlateauJ-plant NWSG treatments compared to control treatments. NWSG cover was higher ($P < 0.0001$) in the spring burn-PlateauJ-plant NWSG treatments (27%) than in the spring burn-Round-Up PROJ-plant NWSG treatments (0.5%). The preliminary results of this study suggest both Round-Up PROJ and PlateauJ herbicides were effective in eradicating tall fescue. NWSG may be established in the first growing season when planted with a native rangeland drill after a winter burn followed by a PlateauJ herbicide application at label rates after green-up.

Additional Key Words: tall fescue conversion, herbicides, native warm-season grasses

¹Brian E. Washburn, Graduate Research Assistant, and Thomas G. Barnes, Associate Extension Professor, Department of Forestry, University of Kentucky, Lexington, KY 40546.