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VEGETATION AND THERMAL CHARACTERISTICS OF BOBWHITE NOCTURNAL ROOST SITES IN NATIVE WARM-SEASON GRASS

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ABSTRACT

Native warm-season grass (NWSG) has been widely promoted as wildlife habitat, but little empirical evidence is available to support its value for most wildlife species. One justification for a conversion to NWSG is the high thermal quality of cover resulting from the height and structure of the vegetation. Because vegetation cover is an important factor contributing to bobwhite winter survival, we predicted that they should select roost sites with superior thermal characteristics during winter when energy requirements for thermoregulation are greatest. In this 3-year study we used data derived from roost sites ($n = 166$) obtained from radio-marked quail to compare the relative use of NWSG and 5 other habitat types, and the micro-habitat characteristics of winter roost and random sites on an area intensively managed for quail in Missouri. Of the 6 habitats used for roosting, most locations (51.2%) were in old-field habitats. NWSG ranked third with 17% of the locations. Our findings indicated that roost site selection may be influenced to a greater extent by the micro-habitat characteristics of a site rather than by habitat type. Two micro-habitat features that were of particular importance in habitats used most by quail were litter cover and canopy cover. These habitat features are valuable in reducing conductive and convective heat loss.

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