

# Use of Habitat and Landowner Suitability Models as Tools for Selecting Large-scale Quail Habitat Restoration Areas on Private Land in Missouri

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*Abstract:* In response to dwindling populations of northern bobwhite (*Colinus virginianus*), the Northern Bobwhite Conservation Initiative and the Missouri Department of Conservation's Strategic Guidance for Northern Bobwhite Restoration are guiding habitat restoration efforts in Missouri. Success of these programs is dependent on restoration of habitat on large tracts of private land. Efficacious selection of restoration areas requires a foundation of ecological and sociological information. Although we know much about bobwhite ecology, our success at engaging landowners in habitat restoration has been limited. Our objective was to develop a systematic approach for using ecological and sociological data to identify potential private land restoration areas. We used a questionnaire to assess landowner willingness, motivations, and ability to carry out habitat restoration in a cooperative setting. We obtained land ownership information (1,738 names, addresses, and telephone numbers) for 5-28,000 ha-study areas in northern Missouri and mailed a questionnaire to all landowners for whom we had a valid address. We followed up the mail survey with a telephone survey on nonrespondents. For the mailing, 735 landowners completed the survey (44% response rate), and for landowners that were actually contacted in the telephone nonrespondent study, 51% agreed to answer the survey. The proportion of respondents that indicated it was important to have quail on their property was 81% (mail) and 82% (telephone). Despite the high popularity of quail, only 39% of mail respondents and 49% of telephone respondents were interested in joining a habitat restoration cooperative. A somewhat greater proportion of landowners were willing to use quail-friendly habitat management practices (planting grain food plots [ $>50\%$ ], disking [ $>40\%$ ], etc.). The most important factors in deciding how to manage land related to quality of life: e.g., enjoying land ownership with family, and, secondarily, income. Results of this study will help guide efforts in implementing restoration programs.

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