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RESULTS FROM KENTUCKY'S 10-YEAR BOBWHITE RECOVERY PLAN

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ABSTRACT

The northern bobwhite (*Colinus virginianus*; hereafter, bobwhite) has experienced a precipitous population decline through almost all its historical range over the last 6 decades. We initiated a 10-year restoration plan in Kentucky, USA in 2008 and reported on it through 3 published "Road to Recovery" reports along with 30 peer-reviewed articles and abstracts, 2 technical documents, 7 theses or dissertations, and 11 popular literature pieces. Seven Quail Focus Areas were selected across the state based on site personnel, geographic position (east to west), and land ownership (e.g., private, public, state, federal) for monitoring and habitat management. The focus areas averaged 11,895 acres and area managed for quail on an annual basis ranged from 9% to 42%. Management took the form of herbicide applications, disking, fire, planting, grazing, control of woody vegetation, and mowing. Hierarchical distance sampling models using time-of-removal information to inform detection processes were used to assess bobwhite density on each focus area. Models were based on spring breeding bird point counts in which a suite of grassland songbirds were recorded and fall covey counts in which only bobwhite were recorded. Roadside surveys (direct observation) and hunter harvest information were also used for statewide comparisons of focus areas and statewide trends. Across all years and focus areas a 40% increase in the quail population was observed in 20 years (38%) of the possible 53 years of survey data. Stable to increasing trends were also observed in focal area populations of dickcissel (*Spiza americana*), eastern meadowlark (*Sturnella magna*), eastern kingbird (*Tyrannus tyrannus*), field sparrow (*Spizella pusilla*), prairie warbler (*Setophaga discolor*), and Bell's vireo (*Vireo bellii*). A focus on habitat management and associated monitoring on relatively small (<20,000 acres) areas was shown to be successful on an individual area, as determined by increases in bird numbers across years and challenges completed in the Quail Plan but did not result in an observed increase in statewide quail indices. Future quail restoration plans in Kentucky should be directed more toward open production land, which is made up of 6 million acres of pastureland, hay land, row crop agriculture, reverting fields, reclaimed mineland, and grasslands. This work will be completed by utilizing working lands, such as field borders in row crop systems and grazing native warm-season grasses in pasture or hay systems, for wildlife activities. Monitoring systems on these production lands will be in the breeding season only and autonomous recording devices will be used in lieu of human observers to cover the greater area of open landscape.

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Key words: *Colinus virginianus*, focus area, Kentucky, northern bobwhite, plan, point count, quail, Road to Recovery, southeast, survey

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