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Integrating Northern Bobwhite and Grassland Bird Habitat Enhancement Practices on University of Missouri Agriculture Experiment Stations: An Educational Model That Puts Knowledge into Action through Use of Demonstrations

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Over the past 50 years, advances in agricultural production negatively influenced habitats for bobwhite quail (*Colinus virginianus*) and grassland bird species. Farming systems, once beneficial for bobwhite, greater prairie chicken (*Tympanuchus cupido*), Henslow's sparrow (*Ammodramus henslowii*), eastern meadowlark (*Sturnella magna*), and many other wildlife species, provided a diversity of early successional habitats. With increases in farm size, intensive cultivation, chemical weed and insect pest control and more efficient harvest practices, many producers have been able to stay in business, but quality habitats for many species have been reduced.

During 2005, the Bradford Research and Extension Center (BREC) of the University of Missouri expanded its mission to address the educational needs of the whole agricultural community, which includes designing and implementing management practices that enhance wildlife habitat while complementing the agronomic objectives of the farm. Wildlife populations are dependent on the management decisions made by private landowners. Most farms contain areas that can be managed for wildlife that are dependent on early successional plant communities.

Recently at BREC, wildlife habitat management demonstrations have been developed to enhance habitats for bobwhite quail and grassland birds. These have been successfully integrated with ongoing agricultural objectives without reducing farm profits. The "Missouri Bobwhite Quail Habitat Appraisal Guide" (MU Extension Publication 902; White et al. 2005) was used as a tool for identifying limiting factors and making habitat management decisions to create more usable space for bobwhites on the farm and surrounding lands. The habitat components most limiting were determined to be a lack of brood-rearing cover and escape cover. As a result, initial management activities have focused on supplying these missing habitat components by establishing covey headquarters, renovating tall fescue pastures, restoring native prairies, implementing woodland edge-feathering techniques, managing native warm-season grasses, and establishing fence-rows and field borders. In addition, landowners of adjacent properties are implementing practices that benefit bobwhite quail.

During 2005 and 2006, 4 field days and tours that featured bobwhite quail and wildlife habitat management themes were conducted at BREC. These programs targeted a variety of clientele groups,

including youth, agricultural producers, and landowners interested in enhancing recreational opportunities on their property. During this period, over 2,500 people participated in educational programs and learned management techniques to benefit wildlife on their property or farm. Initial survey results indicate that participants greatly enjoyed the educational experiences and gained knowledge on managing bobwhites and grassland birds. In addition, a large percentage of the adult participants plan to implement habitat management techniques for wildlife benefits on their property.

The use of demonstrations has been and will continue to be an excellent Extension teaching method. This educational approach emphasizes the development of wildlife habitat management demonstrations with the ongoing agricultural objectives of the BREC, one of 10 MU Farms and Centers. Hopefully, this approach can also serve as a model for integrating wildlife considerations that complement the agricultural objectives at other Agricultural Experiment Stations in Missouri.

Literature Cited

White, B., P. Graham, and R. A. Pierce II. 2005. Missouri bobwhite quail habitat appraisal guide: assessing your farm's potential for bobwhites. MU Extension MP 902. 16 pp.