

ASSESSING BOBWHITE RESPONSE TO EQIP IMPLEMENTATION IN THE ROLLING PLAINS OF TEXAS

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INTRODUCTION

The Rolling Plains of northwest Texas are 1 of the last bastions for viable northern bobwhite populations. But even here, bobwhite numbers have decreased an average of 3.4% annually since 1980. The decline of bobwhites in its traditional strongholds (i.e., the southeastern U.S.) has heightened landowner awareness of the plight (hence the value) of quail in Texas. Farm Bill programs like EQIP have been very popular in Texas, and purportedly can improve bobwhite habitat. The Rolling Plains of Texas is one of 3 EQIP areas focused on bobwhite habitat concerns. Texas garnered the largest EQIP allocation of any state in 2004 (\$78.6 million). Northern bobwhite is a priority species for EQIP in 58 counties of the Rolling Plains. The most popular EQIP-funded practice in FY 2003 was brush management, which accounted for 26% of the \$46.5 million of the EQIP dollars expended. We initiated research in May 2005 to test the hypothesis that brush management, if done in moderation, enhances bobwhite habitat (and promotes greater quail abundance) in the Rolling Plains. We specifically chose to evaluate bobwhite response to EQIP-sponsored brush management at intervals 2 to 4 years post-implementation.

Treatment sites consisted of areas that were enrolled in EQIP between the years of 1999 and 2002. Control sites were identified as an area where no brush control practice had been implemented. At each treatment and control site an array of quail population indices (Figure 1) (spring call count, fall covey call count), habitat evaluation (Figure 2) (Robel pole estimates, potential nest sites per acre, forb diversity), and predator activity (Figure 3) (scent station survey, dummy nest transects) were conducted in a 200-acre buffer around an established center point along a 1,200 meter transect line bisecting the site. GIS and GPS technology were used to create polygons overlaid on digital aerial photography to create a map of the treated area (Figure 4)

OBJECTIVES

1. Evaluate relative abundance of bobwhites on areas with/without EQIP brush control practices conducted between the years of 1999 and 2004.
2. Compare vegetation response to EQIP practices as it relates to bobwhite quail.

PROGRESS TO DATE

We monitored a total of 70 study sites (35 treatment and 35 control sites) during the summer of 2005. Study areas selected for 2005 were located on private ranches located in Coleman, Fisher, Scurry, Cottle, and Shackelford counties. All study sites were mapped, and are in the process of being analyzed.

Spring call counts on treated areas had greater numbers of calling males ($P = 0.04$) in Shackelford County (an average 3.7 ± 0.25 and 2.7 ± 0.29 cocks, respectively); no differences were observed for calling males at other sites. The site x treatment interaction was not significant. Other data analyses and summary are pending.

The past 2 years of beneficial weather in the Rolling plains have resulted in a bumper crop of quail prior to the initiation of the study. We realize a priori that this greater abundance of bobwhites makes it difficult to measure differences between control and treatment areas because quail populations were rather evenly distributed across the landscape.

PRESENTATIONS

Taylor, B. D., and D. Rollins. 2005. Assessing Bobwhite Response to EQIP Implementation in the Rolling Plains of Texas (*Poster*). Southeast Quail Study Group. Gilbertsville, KY, August 14-17, 2005.

PARTICIPATING AGENCIES AND LANDOWNERS

Rod Hench (Wild Wings Ranch), Kent Mills (Purina Mills), Ed and Don Aiken (Aiken Ranch), Myron Calley (Calley Ranch), Hendricks Ranch Trust (Hendricks Ranch), Mike Meeks (Triangle Ranch), Dirk Van Reenan (Bowen Ranch), David Carothers (Rafter B Ranch), Joe Pat Hemphill (Hemphill Ranch) and Jack Knox (Rafter X Ranch), ranchers who provided study sites.

Rebel Royal and Rocky Vinson, Texas Cooperative Extension, assisted in locating sites for the study. Chuck Kowaleski, Texas Parks & Wildlife Department assisted with the study design and coordination between TPWD and NRCS field staff.

NRCS INVOLVEMENT

Alan Heirman, Biologist; located study sites found in Shackelford County and coordinated meetings with landowners to secure their involvement.

John Tate, District Conservationist; located study sites used in Shackelford County and coordinated meetings with landowners to secure their involvement.

Ricky Linex, Zone Wildlife Biologist; helped with the study site design, and contacted district conservationists across the state to assist with study site selection.

Steve Nelle, Zone Wildlife Biologist; helped with the study site design, and contacted district conservationists across the state to assist with study site selection.