

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

INVESTIGATOR INFORMATION

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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. 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 are 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 are testing the hypothesis that brush management, if done in moderation, enhances bobwhite habitat (and hence promotes greater quail abundance) in the Rolling Plains. We are evaluating bobwhite response to EQIP-sponsored brush management at intervals 2–4 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 (spring call count, fall covey call count), habitat evaluation (Robel pole estimates, potential nest sites per acre, forb diversity, percent canopy cover), and mesocarnivore activity (scent station surveys, dummy nest transects) were conducted in a 200-acre buffer around an established center point. GIS and GPS technologies were used to create polygons overlaid on digital aerial photography to create a map of the treated area.

OBJECTIVES

- 1.) Evaluate the bobwhite population response to EQIP practices conducted between 1999 and 2004.
- 2.) Compare vegetation response to EQIP practices as it relates to bobwhite quail.
- 3.) Determine if any brush management practice increases quail abundance.
- 4.) Determine if the structure and size of brush management areas has an impact on the bobwhite response.

PROGRESS TO DATE

A total of 50 study sites were used throughout the Rolling Plains data collection for year 2 of this study (25 treatment and 25 control). The same sites were used for year 2 (20 study sites were omitted due to logistical restraints). Data collection began May 16, 2006 on a total area of 10,000 acres located on private ranches in Coleman, Cottle, Foard, and Shackelford Counties.

We detected no differences in call counts between treatment and control sites for any counties for year 2. There was no difference between years for call counts ($P > 0.05$) for any counties except Coleman County ($P = 0.00$). Calling males were less abundant in Year 2 (4.4 ± 1.01) than Year 1 (7.4 ± 0.48) in Coleman County. Final analyses for both year's data are ongoing. Treatment sites had lower canopy cover than control sites for target species (i.e., mesquite, prickly pear) at all sites ($P < 0.05$) except for Shackelford County ($P = 0.18$). The Shackelford County site had a higher proportion of aeriially-sprayed mesquite treatments than any other county results in lower root-kill than mechanical treatments.

PRESENTATIONS

Taylor, B., D. Rollins, N. Silvy, D. Ransom, and F. Smeins. Assessing Bobwhite response to EQIP implementation in the Rolling Plains of Texas. (Poster). 6th National Quail Symposium, Athens, GA.

Taylor, B., D. Rollins, N. Silvy, D. Ransom, and F. Smeins. Assessing Bobwhite response to EQIP implementation in the Rolling Plains of Texas. Red River Quail Symposium. Wichita Falls, TX, October 11-13, 2006.

PUBLICATIONS

None to date

PARTICIPATING AGENCIES AND LANDOWNERS

Landowners. Rod Hench (Wild Wings Ranch), Ed and Don Aiken (Aiken Ranch), David Carothers (Rafter B Ranch), Joe Pat Hemphill (Hemphill Ranch), Jack Knox (Rafter X Ranch), Kent Mills (Hi Pro Feeds), Myron Calley (Calley Ranch), Hendricks Ranch Trust (Hendricks Ranch), Mike Meeks (Triangle Ranch), Dirk Van Reenan (Bowen Ranch)

Texas Cooperative Extension, Rebel Royal, and Rocky Vinson assisted in locating sites for the study.

Chuck Kowaleski, Texas Parks & Wildlife Department. Chuck assisted with the study design and coordinated between TPWD and NRCS field staff.

NRCS INVOLVEMENT

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

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

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

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