

**BOLL WEEVIL ERADICATION IN THE NORTHERN ROLLING
PLAINS AND SOUTHWESTERN OKLAHOMA**

Emory Boring and Dr. Jeffrey Slosser
Texas Cooperative Extension
Vernon, TX

Dr. Miles Karner and Jerry Goodson
OSU
Altus, OK

Abstract

A cooperative project between Oklahoma and Texas Extension Services was proposed to evaluate progress of eradication efforts and detect possible migration between states by establishing strategically placed 16 pheromone traps throughout the growing season in 2001. From May 15 through November 5 only seven boll weevils were caught and all of these were caught during June. Six boll weevils were caught in three Oklahoma traps and one was captured in the Texas traps. The traps results did not show movement between Oklahoma and Texas and gave no indication of the direction of movement. Trapping data for both states indicate equally effective eradication efforts and indicate both states' programs can be completed simultaneously lowering projected expenditures. To show the effectiveness and progress of these independent eradication efforts 2002 boll weevil trapping trends are highlighted.

Introduction

In Oklahoma and in the Northern Rolling Plains (NRP) of Texas the diapause phase of boll weevil eradication was completed in the fall of 1998 and the fall of 1999 respectively. The 2002 cotton crop was the fourth full year of the program in Oklahoma and the third full year in Texas. To reduce cost it would be best if both programs could be completed simultaneously.

Eradication programs in Oklahoma and Texas are administered by two different groups, the Oklahoma Boll Weevil Eradication Organization (OBWEO) and the Texas Boll Weevil Eradication Foundation, Incorporated (TBWEFI). These programs are similar, but they have different funding structures. Boll weevil eradication is the objective of each of the programs. Unfortunately, there is no natural barrier to prevent boll weevil movement between programs. This interstate boll weevil movement could impact completion and result in increased cost. The focus of trapping strategies in both programs is to trigger insecticide applications not to detect possible migration.

The OBWEO and TBWEFI trapped boll weevils weekly and in both programs there was about 1 trap per 5 acres of cotton. In Oklahoma boll weevils were trapped by counties, but in the Texas NRP trapping was done by district and work unit. Each work unit contained about 25,000 acres of cotton. Eight counties in Southwest Oklahoma accounted for 80% (139,230 acres) of the state's 174,354 cotton acres, and three of these, Jackson, Harmon and Tillman counties, account for 67% of the cotton acreage. Roger Mills, Beckham, Cotton, Jackson, Harmon and Tillman counties border Texas. Greer and Kiowa counties are also part of the southwest Oklahoma production region, but they are one county away from the state border.

Materials and Methods

Boll weevil trapping data for the Rolling Plains of Texas and Oklahoma were compared in 2002 to determine the progress of eradication efforts in both States.

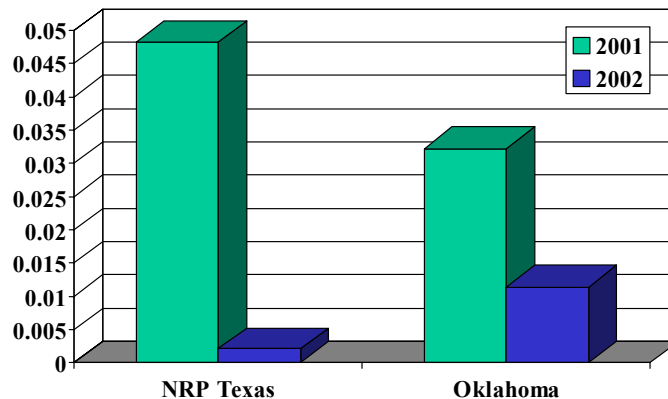
Boll Weevil Eradication Programs Cotton Acreage

	Oklahoma	NRP
1998	116,000	287,800
1999	168,000	249,497
2000	111,000	337,422
2001	198,428	343,230
2002	174,354	355,347

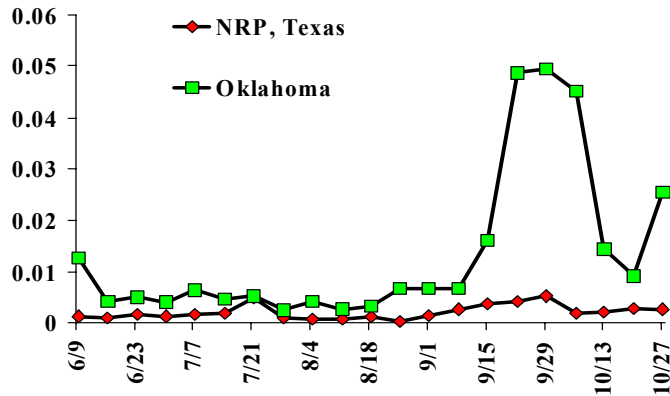
Average Boll Weevils/Trap Week June 4 - October 28

	Oklahoma	NRP
2000	1.306	3.671
2001	0.032	0.048
2002	0.012	0.002

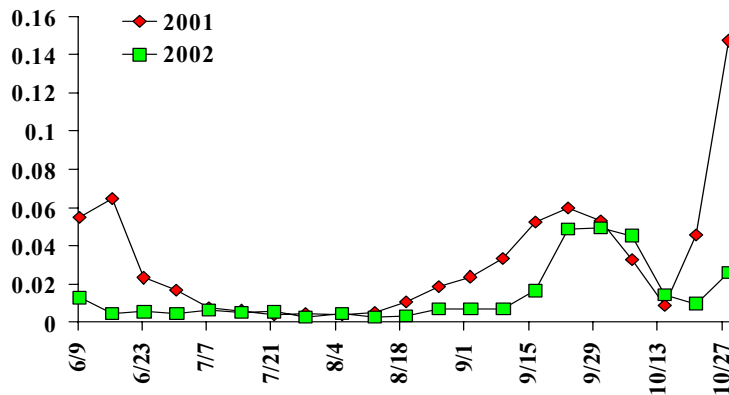
Boll Weevils/Trap Week



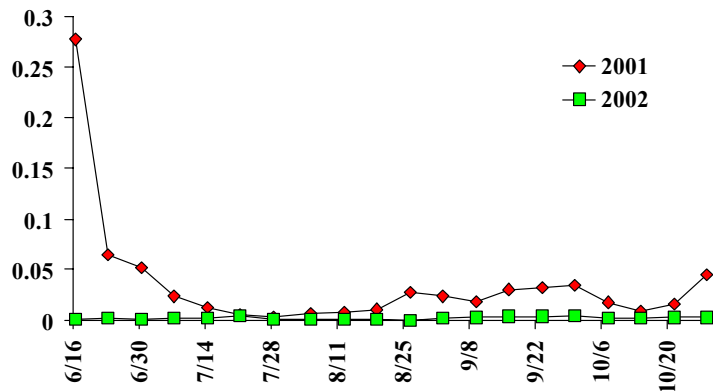
Boll Weevils/Trap Week, 2002



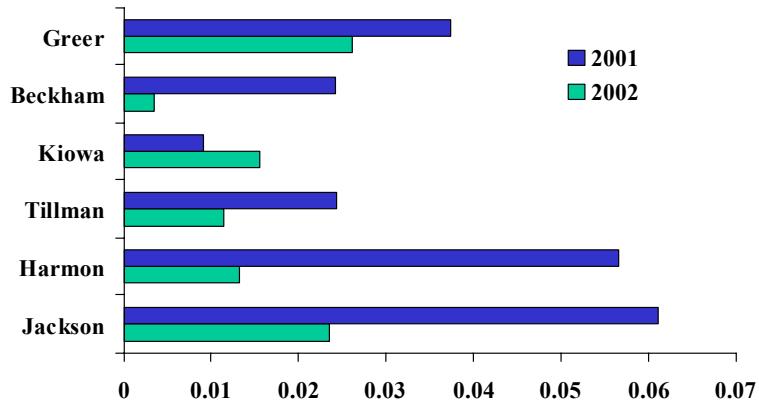
Boll Weevils/Trap Week, Oklahoma



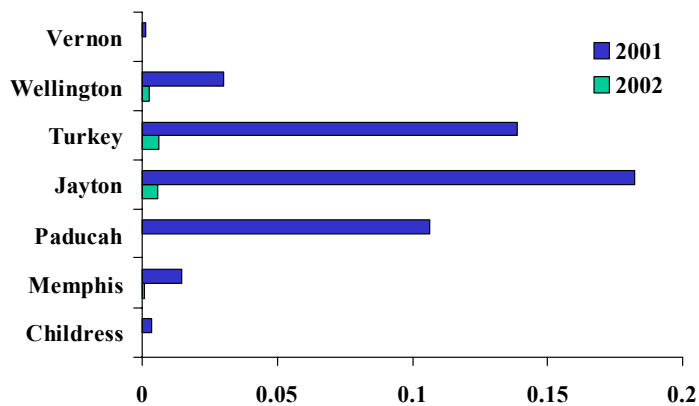
Boll Weevils/Trap Week Texas NRP



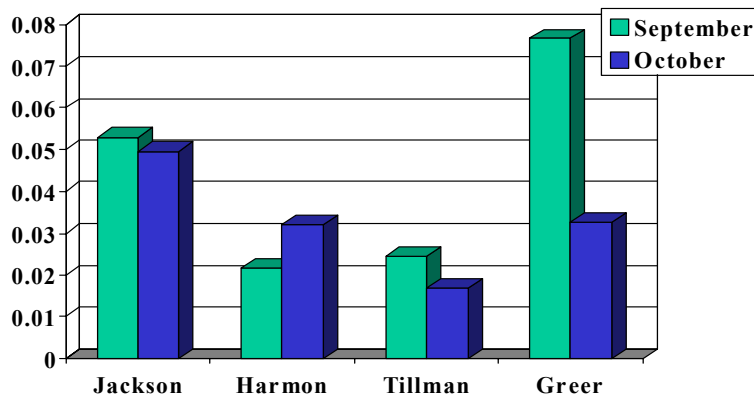
Boll Weevils/Trap Week Oklahoma



Boll Weevils/Trap Week Texas NRP

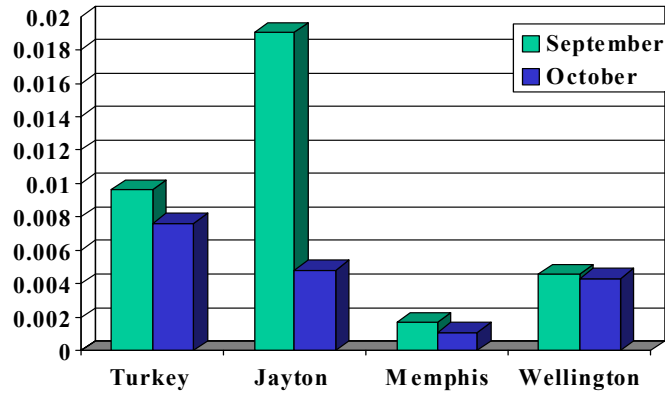


Boll Weevils/Trap Week, 2002 Oklahoma Counties

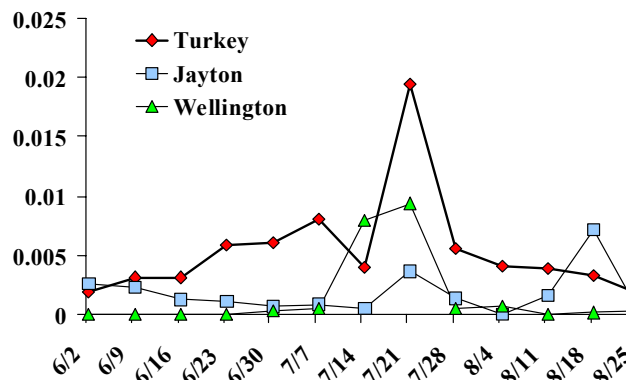


Boll Weevils/Trap Week, 2002

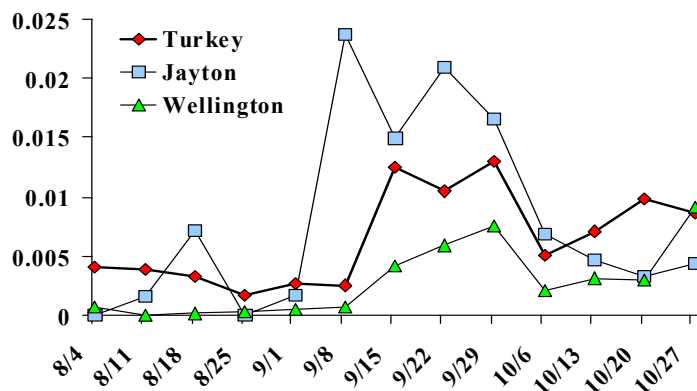
NRP Texas Districts



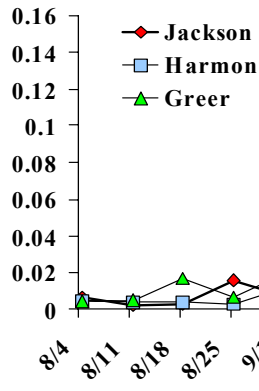
Boll Weevils/Trap Week in Texas NRP Districts, 2002



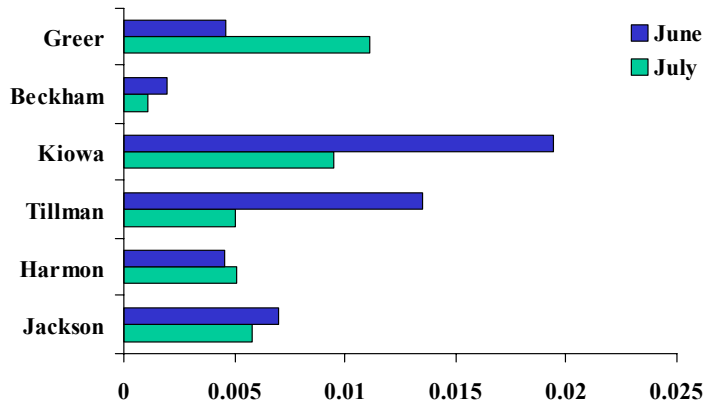
Boll Weevils/Trap Week in Texas NRP Districts, 2002



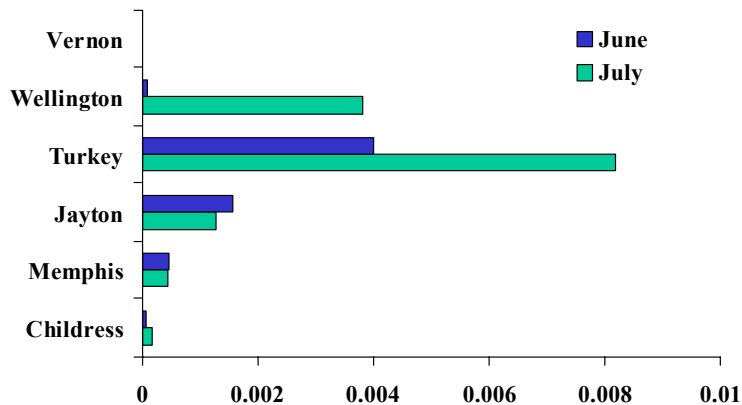
Boll Weevils/Trap Week in Oklahoma Counties, 2002



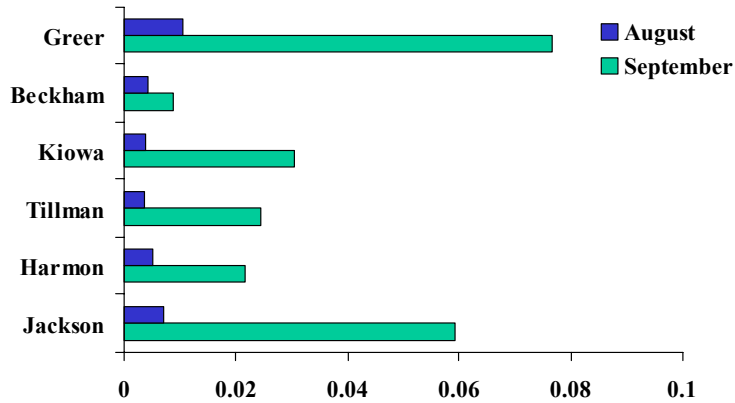
Boll Weevils/Trap Week Oklahoma, 2002



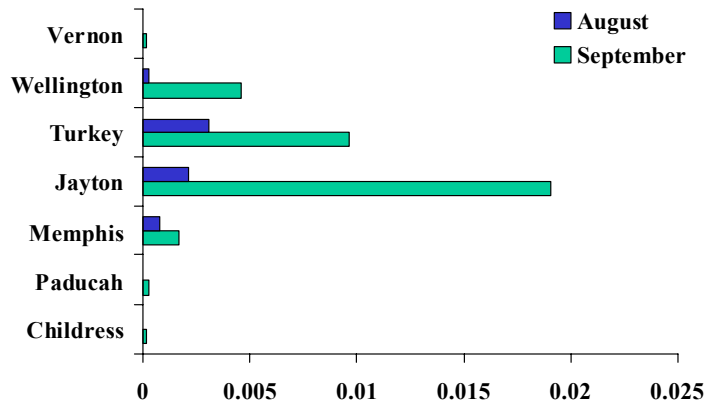
Boll Weevils/Trap Week Texas NRP, 2002



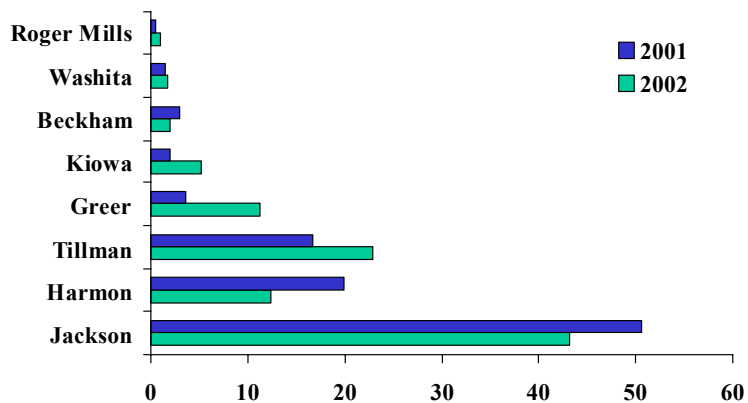
Boll Weevils/Trap Week Oklahoma, 2002



Boll Weevils/Trap Week Texas NRP, 2002



% Boll Weevils Trapped in Southwest Oklahoma Counties



% Boll Weevils Trapped Texas NRP Districts

