

# Boll Weevil Scouting Guide

Cooperative Extension Service  
College of Agriculture and Home Economics



## Guide A-218

Lloyd M. English, Extension Entomology Specialist  
Shane T. Ball, Extension Agronomy Specialist

This publication is scheduled to be updated and reissued 3/04.

Regular scouting of cotton fields allows producers to treat a boll weevil infestation before serious damage is done. Determining when to begin spraying for boll weevils is a crucial decision for producers. Proper scouting methods and timely insecticide applications at the thresholds given below will maximize boll weevil control and allow beneficial insects and spiders to reestablish.

### Growth Stage: Crop Emergence to Early Squaring (pinhead- to matchhead-sized squares)

Between crop emergence and early squaring, emerging adult boll weevils are difficult to find in the field. They generally have less than two weeks to live when squaring cotton is not available for food. However, you can examine the plant terminals and leaf petioles for weevils, and estimate the population from 250 feet

of randomly selected rows (for example, five rows of 50 feet each).

Generally, the trap index system is used to determine the need for boll weevil control in early-squaring cotton. This system uses pheromone traps that are inspected weekly from planting to squaring to monitor adult boll weevils that have emerged from hibernation. Numbers of weevils caught in the traps one week before and during early squaring provide the best advance notice of potential weevil infestations. The trap index also can be useful in helping to decide whether insecticide applications are necessary (table 1).

Efficient use of insecticide while squares are pinhead- to matchhead-sized can reduce or delay the need for late-season treatments. The first application should be made just before the youngest squares are one-third grown (about 1/4 inch in diameter). Several treatments at five- to seven-day intervals may be necessary to control boll weevil infestations.

**Table 1. Trap index system for control of early-season adult boll weevils.**

Trap index	Decision
≤1 weevil per trap per week	No treatment needed
>1 but < 4 weevils per trap per week	Treat if: a) the number of weevils captured for the week prior to pinhead-sized squares was > 10, OR b) field inspection at one-third-grown-square stage shows 20% damaged squares, OR presence of > 4 weevils per 100 feet of row
> 4 weevils per trap per week	Treatment needed

*Adapted from Ward, 1994 (a)*

### **Growth Stage: Early Squaring to Cut Out**

From early squaring (pinhead- to matchhead-sized squares) to cut out, cotton should be field inspected weekly. Select 25 squares that are at least one-third grown (1/4 inch in diameter) from each of four different areas of the field (100 total), and from different positions in the plant. If 20 percent of the squares have punctures, or the spot of sealing glue appears as a small yellow bump, an insecticide treatment is needed. Or, if more than four adult weevils per 100 feet of row are found, apply insecticide at the one-third-grown stage. Infested squares have bracts that flare away from the square, turn yellow, and fall to the ground about one week after an egg was deposited.

### **Growth Stage: Peak Bloom to Defoliation**

Between peak bloom and defoliation, continue sampling 100 squares from each field. Apply an insecticide when 25 percent of the squares are damaged by weevils.

After cut out, examine any small bolls that could mature before defoliation (or first frost); treat when 15 percent of the small bolls are dam-

aged by weevils. Generally, these immature bolls are 12 to 15 days old. Because late-season bolls and foliage are food sources for boll weevils, tank mixing an insecticide with the harvest aid will reduce overwintering boll weevils.

### **References**

- Rummel, D.R., J.E. Slosser, S.C. Carroll, J.F. Leser, T.W. Fuchs, R.E. Frisbie, P.L. Adkisson, T.A. Doederlein, K.D. Hake, R.K. Haldenby, and M.A. Scott. 1995. *Boll weevil management for the Texas High Plains*. Texas High Plains Boll Weevil Task Force Entomology Fact Sheet. Texas A&M University, College Station: Texas Agricultural Extension Service. 13 pp.
- Ward, Charles R. 1994(a). *Cotton insect management suggestions for 1994-1995*. New Mexico State University, Cooperative Extension Service. Handbook 10-A. 18 pp.
- Ward, Charles R. 1994(b). *Insecticides for use with cotton insect management suggestions for 1994-1995*. New Mexico State University, Cooperative Extension Service. Handbook 10-B. 16 pp.

To find more resources for your home, family, or business, visit the College of Agriculture and Home Economics on the World Wide Web at <http://www.cahe.nmsu.edu>

New Mexico State University is an equal opportunity/affirmative action employer and educator. NMSU and the U.S. Department of Agriculture cooperating.

**Reprinted March 1999**

**Las Cruces, NM**  
5C