

**SCOUTMAP: COTMAN MONITORING
TECHNIQUE FOR BOLL SHED AND INSECT
DAMAGE**

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Abstract

ScoutMap is a supplemental sampling procedure that is being tested as part of the COTMAN computer program. Its purpose is to support calculation of a plant-based economic injury level that is currently under development. This report provides a brief description of the sampling procedure, examples of output and correlation of ScoutMap data with conventional scouting data.

Samples are collected using a slight modification of the quadrat sampling scheme proposed by Willers (1995). The procedure calls for the random selection of a quadrat (2 row x 9 ft.) in four or more locations within a field. From each quadrat, representative plants (≤ 5) with a white flower in the first nodal position are examined. First positions are classified and coded: 0 = shed; 1 = no injury; injury caused by 2 = worms, 3 = boll weevil, 4 = plant bug; and 5 = white flower. Squares free of external symptoms of injury are examined internally for plant bug-damaged anthers.

Results from comparable ScoutMap data that measured weevil-damaged squares were correlated with those from standard boll weevil counts in the same plots ($p < .0001$, $r = 0.78$, $df = 22$).

ScoutMap output presents percent square or boll positions shed or damaged by insects. For each sampling date summary statistics are calculated over all first positions, small and large squares or bolls and for each node. Shedding of small bolls (1-3 first positions below white flower) that occurs when insect injury symptoms are nil or low is assumed to be an expression of shedding induced by physiological stress involving factors other than insects.

References

Willers, J.L. 1995. Quadrat sampling schemes for plant bugs and damage. Tarnished plant bug symposium, Delta Research & Extension Center, Stoneville, Mississippi.