

OBSERVATIONS OF EMERGING PESTS IN LOW SPRAY ENVIRONMENTS

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Abstract

Georgia and other areas of the southeast have seen dramatic reductions in insecticide use since the successful elimination of the boll weevil as an economic pest. Insecticide use in Georgia has been reduced from 10 to 12 applications per year prior to boll weevil eradication to less than five in recent years. The adoption of transgenic Bt cottons by growers has further reduced the number of insecticide applications required. From 1996 to 1998 the average number of sprays applied to Bt cotton in Georgia is 1.2 per acre compared with 3.8 on non-Bt cotton. This significant reduction in insecticide applications has altered the pest complexes observed. There are also tremendous opportunities to utilize biological controls such as predatory and parasitic insects for some pests in this low spray environment. However, insect pests which do not have effective natural enemies may potentially flourish in these systems. Two examples include stink bugs and plant bugs. Fortunately plant bugs are not a wide spread problem in Georgia, but stink bugs are emerging as a primary pest during mid to late season. Prior to the eradication of the boll weevil and the introduction of Bt cotton, insecticide applications targeting pests such as boll weevil and tobacco budworm provided coincidental control of stink bugs. Good control of stink bugs may be achieved with most pyrethroids and boll weevil insecticides. Additionally, fall armyworm populations may overwhelm natural controls in some parts of Georgia. Fall armyworm is a difficult insect to control with insecticides. Timing is of utmost importance for a successful treatment. If fall armyworms are treated when very small (1-2 days), good suppression may be achieved with pyrethroids. Fall armyworm typically infests Georgia cotton in the same window as tobacco budworm and bollworm and was often coincidentally controlled with pyrethroid applications. The potential of these emerging pests in low spray environments will place a premium on good pest monitoring and decision making in order to maximize returns.