

**DISTRIBUTION OF STINK BUG DAMAGE AND
ITS RELATIONSHIP TO YIELD**
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Abstract

Field experiments were conducted at two locations, irrigated and dryland, in Irwin County GA by initiating stink bug insecticide applications based on the use of a 20 percent internal boll injury threshold. Twenty-five bolls 10-14 days from white bloom (i.e. can be easily squashed in the palm of your hand) were randomly selected and examined for boll injury each week. Bolls were considered damaged if a wart or callous growth occurred on the inner surface of the boll wall and/or stained lint was present. Untreated and pyrethroid treated plots 18-20 rows wide and replicated three times were established at each location. Internal boll damage was significantly reduced at both locations following insecticide application based on the above mentioned monitoring procedures. The distribution of stink bug damaged locks and bolls on plants was quantified by examining all bolls by position on two five feet sections of row in each plot within one week of boll opening. Locks were considered damaged if a wart or callous growth was found on the inner boll wall associated with a particular lock. Bolls were considered damaged if one or more locks were damaged. Data were grouped into five plant zones (attempts were made to group fruiting positions that bloomed during a similar period of time). The percentage of stink bug damaged locks and bolls were generally significantly ($P<0.10$) reduced in the middle and upper plant zones in the treated plots. Prior to commercial harvest of fields, sections of row adjacent to earlier boll sample sites were hand harvested by position. Significant ($P<0.10$) increases in yield and boll weight were observed at the irrigated location. Yield was increased on the lower four plant zones and boll weight was increased in the upper four plant zones. Although not significant, similar trends were observed at the dryland location. The number of bolls per plant zone were not significantly different at either location. This preliminary summary suggests that yield loss resulting from stink bugs results from reduced boll weights.