INCREASED STINK BUG DAMAGE IN LATE PLANTED COTTON David Griffin Ishakh Pulakkatu thodi Michael Toews University of Georgia Tifton, Georgia

<u>Abstract</u>

Phytophagous stink bugs are economically important pests of annual and perennial crops in the southeastern United States. Due to insecticide resistance and risk of secondary pest outbreaks following stink bug targeted insecticide applications, there is interest in identifying cultural practices that could lead to improved management options. The objective of this project was to assess the importance of cotton planting date on stink bug damage in unsprayed plots. Replicated cotton plots with fortnightly planting dates (May 12, May 26, June 9, and June 23) were planted with DP 0912 B2RF cotton at three locations in southern Georgia. During the bloom cycle, stink bug induced boll injury was estimated weekly in each plot by harvesting 20 immature cotton bolls (2.2 to 2.8 cm diameter) per plot and assessing internal stink bug feeding damage, as noted by the presence of warts or stained lint. Plots were subsequently defoliated, mechanically harvested, ginned, and classed to assess differences in fiber quality. May planted cotton started blooming in mid to late July, while the June planted cotton did not start blooming until mid to late August. Plots of mean percent boll damage showed that the rate of percent boll damage increased with week of bloom to a maximum of 35% boll injury. The slope of these plots was statistically greater for the two June planting dates compared with the slope for the two May planting dates. End of year lint yield showed that there was statistically more lint for the two May planting dates (1564 lb per acre) compared to the June 9 (1266 lb per acre) and June 21 (1054 lb per acre) planting dates. Finally, assessment of color +b (a measure of fiber vellowness) determined that cotton fibers from the June 21 planting date exhibited significantly more vellowing (86.9 +b) than the June 7 planting date (81.1 + b), and these were statistically different from the two May planting dates (75.5 + b). The Extension recommended treatment threshold for spraying stink bugs is when percent boll damage exceeds 10 to 15% during the 3rd through 5th weeks of bloom or 20% during the 6th week of bloom. These data show that cotton planted on May 10 would not require any insecticide applications, yet yielded the most lint. To the contrary, cotton planted in June exceeded the treatment threshold during the third week of bloom and continued to exceed the threshold through the sixth week of bloom. We hypothesize that fewer flowering hosts were available later in the summer, thus June planted cotton became a more attractive stink bug host. These data strongly suggest that producers in the southern coastal plain should plant cotton during May to escape heavy stink bug damage observed in June planted cotton.