



## Mississippi Corn Promotion Board 2021 Progress Report

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Project Title: Identification of Factors Contributing to Early Season Stink Bug Infestations in Field Corn

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### Project Summary (Issue/Response)

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In 2017 substantial numbers of commercial corn fields were infested with stink bugs during the vegetative growth stages. During 2018 infestations were not widespread, however many of the fields that experienced infestations had moderate to severe damage. Damage symptomology was more widespread during 2019. In many fields visual damage symptomology was observed when scouting did not detect stink bug infestations. A masters' project, which was recently completed, examined the damage potential of stink bugs on early vegetative stage corn and the percentage of damaged plants required to reduce yield. However, it is unclear why one field will be infested while another will not.

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### Project Results/Outcomes

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During the spring of 2021, 64 corn fields were examined during mid-April to late-May. These fields were chosen at random. Of these fields 52 were planted to soybeans during 2020. While 3 and 9 were planted to corn and cotton during 2020, respectively. In all fields scouting was focused in areas adjacent to potential stink bug overwintering sites, tree lines, ditch banks, etc. The percent damaged plants included in this report are from those areas. While percent damaged plants across entire fields would be lower. A minimum of 400 plants per field was examined. For corn fields that were planted to corn during 2020, percent stink bug damaged plants ranged from 2.3 – 4.3%. While percent stink bug damaged plants for fields planted to cotton during 2020 ranged from 0 – 3.9%. The majority of the fields examined were planted to soybean during 2020. Percent damaged plants ranged from 0 – 15.2%. The highest percent damaged plants were observed on the April 20 and 27 sample dates. Also the fields with the highest percent damage were at the V6 growth stage, while the other fields sampled during this period were at the V2 to V5 growth stages. This indicates that the earliest planted corn was at higher risk of stink bug infestations.

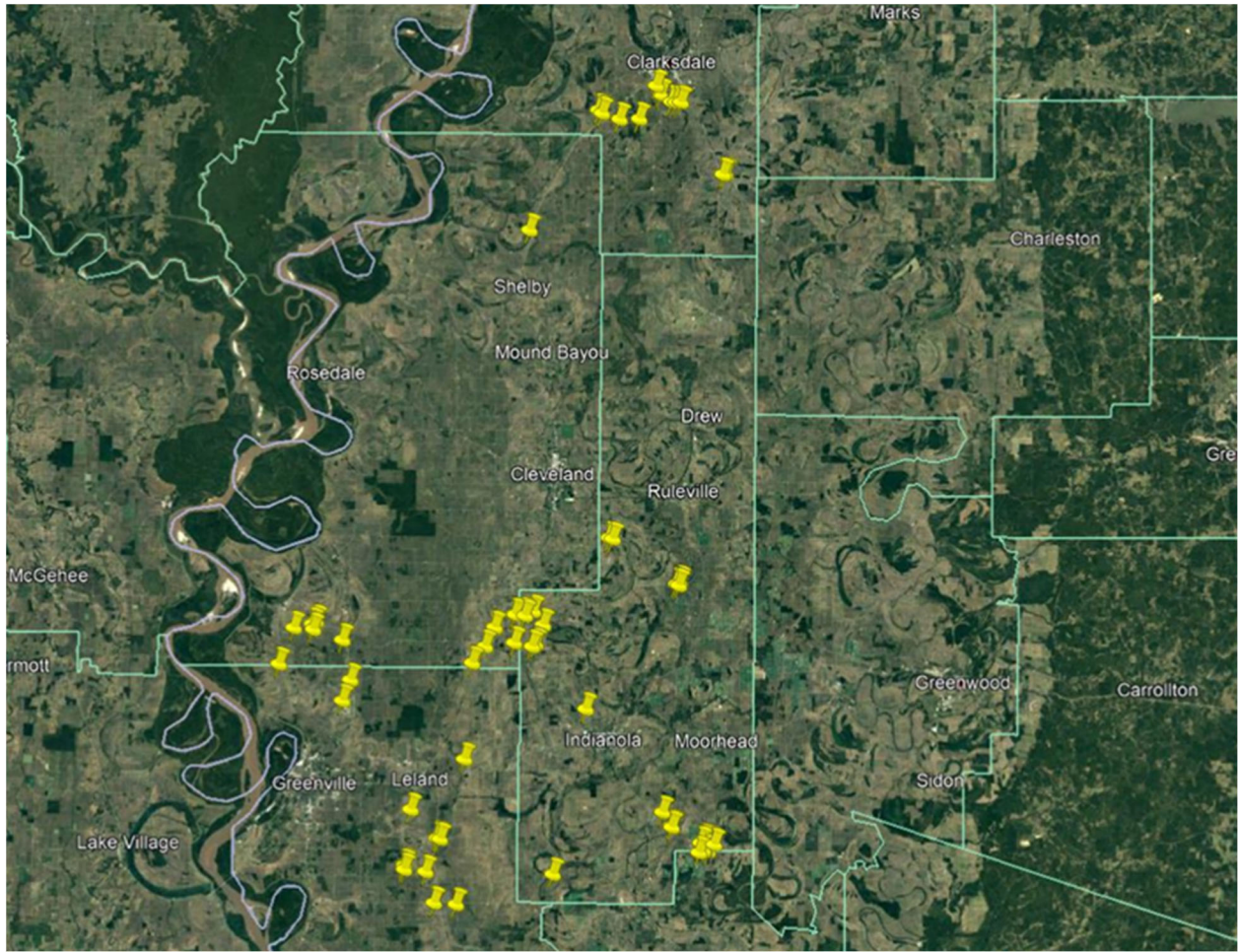


Figure 1. Corn fields sampled for stink bug damage during Apr and May 2021

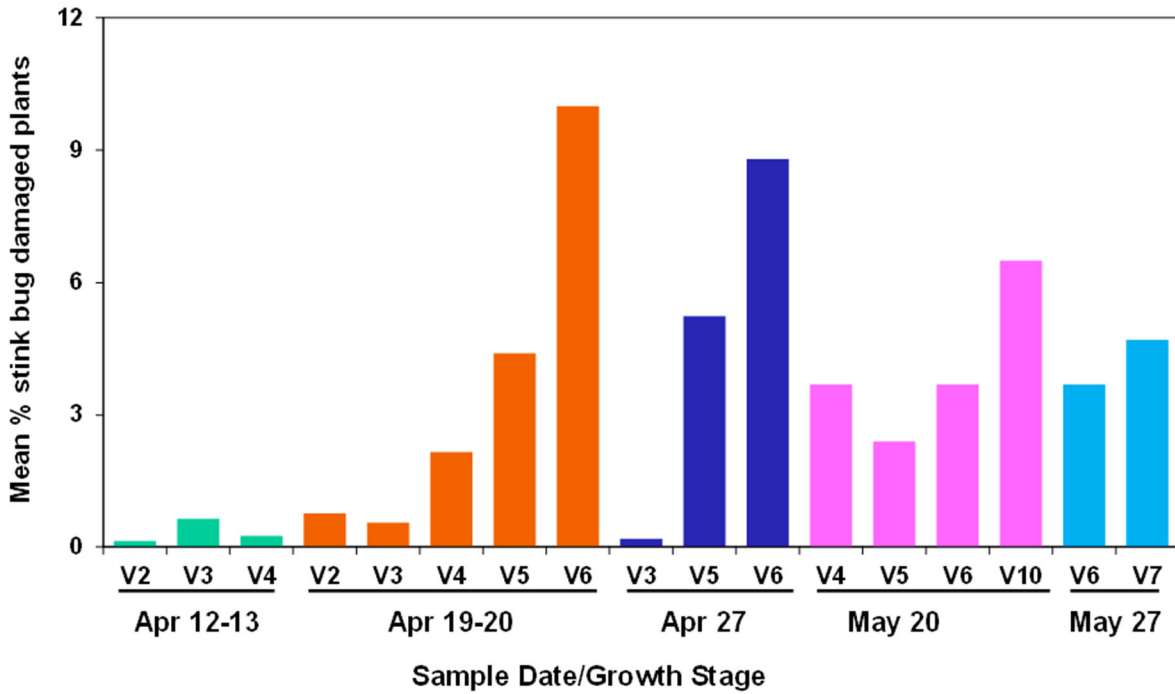


Figure 2. Mean percent stink bug damaged corn plants by sample date and growth stage during 2021. Fields represented here were planted to soybean during 2020

## Project Impacts/Benefits

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These studies demonstrate the impact of stink bug injury on corn yield and give an indication of the amount of yield loss that can occur at varying percentages of stink bug damaged plants. These results also demonstrate the degree or intensity of injury has a dramatic influence on the amount of yield loss that can occur.

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## Project Deliverables

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