



Mississippi Corn Promotion Board 2022 Progress Report

Project

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

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Project Summary (Issue/Response)



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 and 2021. 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.



Project Results/Outcomes

During the spring of 2022, 90 corn fields were examined during mid-April to late-May. These fields were chosen at random, and a total of 106,500 plants were examined. Of these fields 64 were planted to soybeans during 2021. While 13 and 13 field were planted to corn and cotton during 2021, respectively. One field appeared to be fallow during 2021. 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.

The majority of the fields examined were planted to soybean during 2021. The highest percent damaged plants was observed for plants at the V8 stage during mid-May (Figure 1). For corn fields that were planted to corn during 2021, percent stink bug damaged plants was lower than that observed for field planted to soybean during 2021 (data not shown). While mean percent stink bug damaged plants across growth stages for fields planted to cotton during 2021 ranged from 0.67 – 8.9% (data not shown).

Project Results

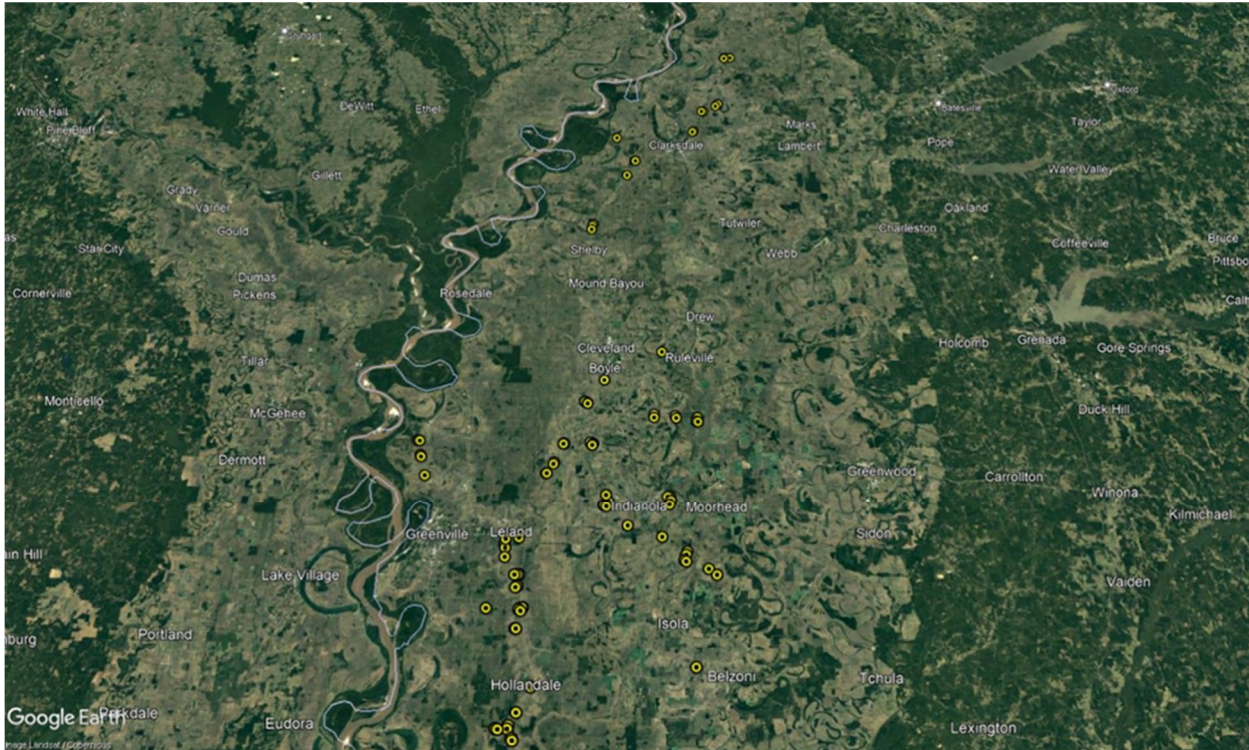


Figure 1. Corn fields sampled for stink bug damage during Apr and May 2022.

Project Impacts/Benefits

These studies provide an indication of some of the factors that increase the risk of season stink bug infestations and damage for early vegetative stage field corn.

Project Deliverables

Results have been presented at grower and consultant meetings. .

Graphics

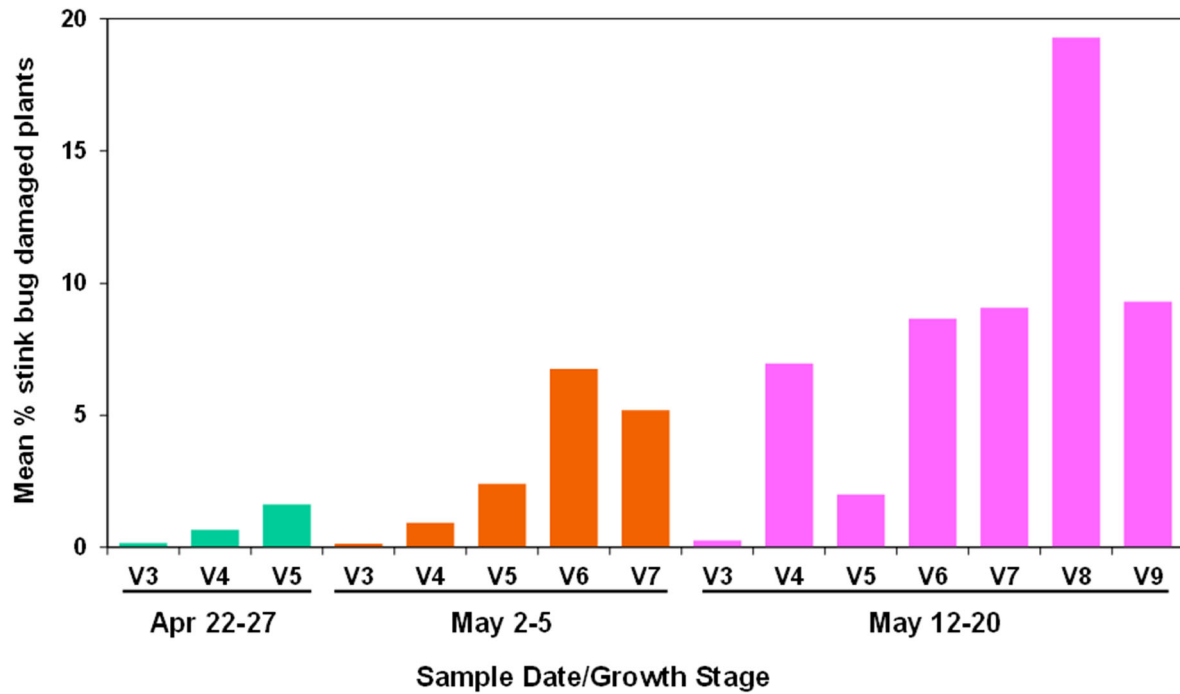


Figure 2. Mean percent stink bug damaged corn plants by sample date and growth stage during 2022. Fields represented here were planted to soybean during 2021.

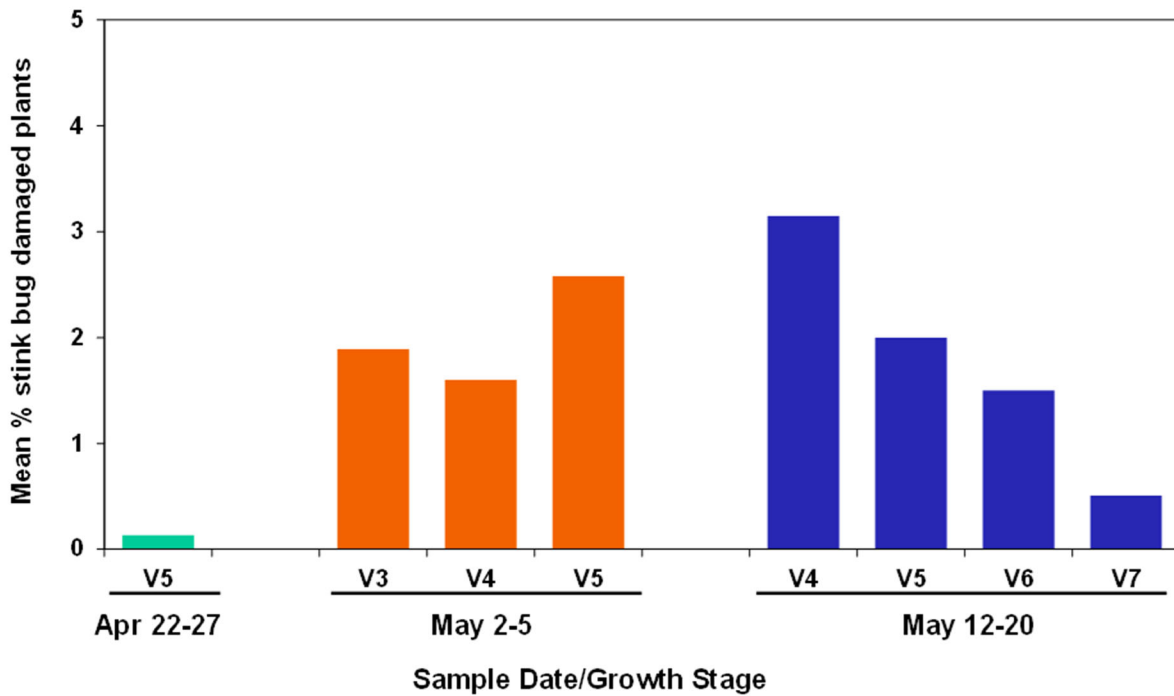


Figure 3. Mean percent stink bug damaged corn plants by sample date and growth stage during 2022. Fields represented here were planted to corn during 2021.

Graphics

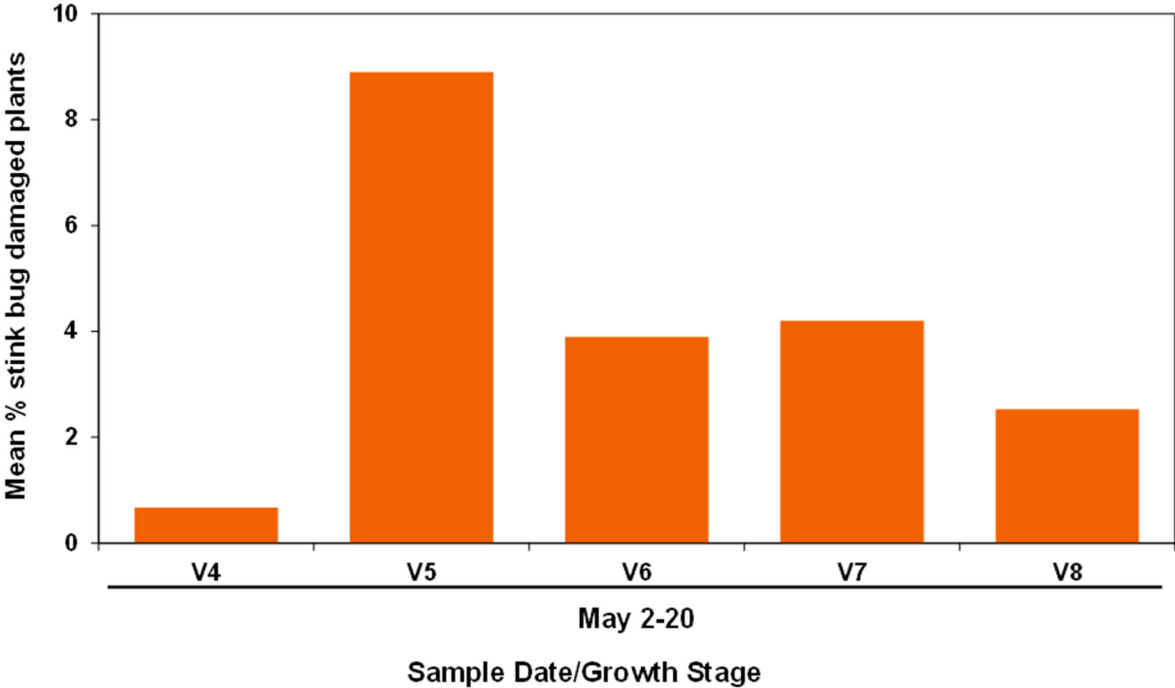


Figure 4. Mean percent stink bug damaged corn plants by sample date and growth stage during 2022. Fields represented here were planted to cotton during 2021.