



## Mississippi Corn Promotion Board 2025 Progress Report

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Title: Southwestern Corn Borer Monitoring Program

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### Project Summary (Issue/Response)

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The southwestern corn borer is one of the most important insect pests of non-Bt corn in Mississippi. Currently, growers are required to plant a refuge of non-Bt corn to satisfy the resistance management plan for Bt corn hybrids. Additionally, there has been an uptick in producer utilization of non-Bt corn hybrids due to lower input costs (decreased technology fees) and competitive yield potential when compared to Bt corn hybrids. Those non-Bt corn acres are subject to potential yield losses from southwestern corn borer annually. Bt corn hybrids have been widely utilized in Mississippi because they provide excellent control. Monitoring for southwestern corn borer in non-Bt corn can be difficult. Due to an economically damaging infestation being difficult to detect, a comprehensive trapping program is needed in Mississippi to help growers properly time insecticide applications in the non-Bt refuge and minimize losses from this insect.

To monitor southwestern corn borer populations throughout the year, pheromone traps will be placed at various locations throughout Mississippi. Every attempt will be made to locate the traps adjacent to a non-Bt corn field. At least 50 traps will be scattered throughout the state, but more will be included as appropriate. The traps will be identified by county and nearest town and the GPS coordinates will be recorded for each trap location. The traps will be monitored weekly and the number of southwestern corn borers per trap will be recorded. Trap counts will be reported weekly on the Mississippi Crop Situation blog ([www.mississippi-crops.com](http://www.mississippi-crops.com)) and through other means to ensure that the information is widely disseminated to growers and consultants.

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### Project Results/Outcomes

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A total of 100 southwestern corn borer trapping locations were monitored from June through August in 2025. This is up from 80 locations from 2024's trapping efforts. Several new counties and extension agents were recruited to aid in trapping efforts to give the trapping program a broader reach across the state. In 2025, 33 trapping participants were involved with this project which is up from 31 in 2024. Trap deployment began around mid June of 2025 in attempts to monitor the first generation of SWCB. The first generation was low across the state, with few individuals being monitored. The second generation were more easily detected, however, total individuals monitored were low. The third generation was not detected due to low trap count and traps being removed from fields for harvest in mid to late August. Overall, trap counts were down from last year with most SWCB catches coming from the central Delta, east into the Hills region (Carroll Co.). These year to year fluctuations, coupled with an increase in non-Bt corn acres highlights the importance of a comprehensive state-wide SWCB trapping program. This particular pest species cannot be predicted and insecticide applications should not be applied preemptively. It is recommended that producers and crop consultants continue to utilize pheromone traps to monitor SWCB to dictate management decisions. Although trapping is recommended in individual fields, these surveys provide tremendous value to corn growers in Mississippi. They provide an initial indication of when SWCB populations are beginning to increase across the state and signal the timings when scouting should be intensified in individual fields. To maximize reach and engagement, efforts are made to publish blog posts with weekly trap counts before the MSU Crops Blog email blast every Saturday at noon. Southwestern corn borer monitoring blog posts received 497 reads across a 12-week sampling window. Monitoring data viewership is up from 212 views across the same trapping window in 2024. This is indicative that these data are meaningful to a considerable clientele base.

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## Project Results

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### Project Impacts/Benefits

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Collaboration with county agents is a major benefit because this allows for area-wide sampling across the state of Mississippi. These data are collected and reported in real-time, allowing for quick dissemination of information on the Mississippi Crop Situation Blog website. Since scouting for southwestern corn borer is incredibly difficult and time consuming, data from this area-wide sampling effort allows stakeholders the information needed to make adjustments in scouting efforts throughout the growing season. Since the percentage of non-Bt corn acreage continues to rise for various reasons, these data continue to become more important annually.

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### Project Deliverables

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Weekly blog articles were published on the Mississippi Crop Situation Blog ([www.mississippi-crops.com](http://www.mississippi-crops.com)) while trapping was being conducted. Data was also disseminated through various other methods including personal communication, local, state, and regional presentations.

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## Additional Questions

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Data generated from this project was utilized to develop a trap threshold for southwestern corn borers, preventing the need for extensive in-field scouting for southwestern corn borer eggs and injury. This threshold has significantly lightened the burden of SWCB monitoring in non-Bt corn acres across Mississippi. In addition to sampling efficiency, this research provides real-time data to all corn growers across the state, preventing poorly timed or unnecessary insecticide applications.

Funding regarding corn is limited to what the MS Corn Promotion Board has provided for this project during the 2023-2025 growing seasons.