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| Please use this form to clearly and concisely report on project progress. The information included should reflect quantifiable results that can be used to evaluate and measure project success. Comments should be limited to the designated boxes. Technical reports, no longer than 4 pages, may be attached to this summary report. |
| Project Number:  | 2022-47 |
| Project Title:  | Exploitation of weed species extracts as an effective and environmental friendly strategy to control insects and deer in soybean |
| Organization:  | Mississippi State University |
| Project Lead Name: | Te Ming (Paul) Tseng |
| Report Date: | July 21, 2022 |
| **National Soybean Checkoff Research Database** [**https://www.soybeanresearchdata.com/**](https://www.soybeanresearchdata.com/) **(public website funded by USB). Please include a non-technical project status along with your project status. The non-technical project status will be published to the website. If a non-technical project status is not provided, the contents of this entire report will be published.** |
| Project Status: |
| Plant extracts of three potential weeds (sicklepod, coffee senna, and hemp sesbania) were prepared using four different methods. (1) Berries/fruits: Fruits will be homogenized followed by centrifugation at 3000g for 15 min; (2) Leaves and stem: Tissue will be homogenized, dissolved in 80% methanol, and centrifuged at 1500g for 10 min; (3) Leaves and stem: Tissue will be homogenized, dissolved in water, and centrifuged at 1500g for 10 min; and (4) Leaves and stem: Tissue were homogenized, dissolved in 70% aqueous acetone, and centrifuged at 1500g for 10 min. Supernatant from each extraction was collected, dissolved in 80% methanol, and freeze-dried. |
| **Non-technical project status:** |
| Plant extracts of three weed species (sicklepod, coffee senna, and hemp sesbania) were prepared using their fruits, leaves, and stem. All tissues were homogenized, dissolved in acetone, and extracted. Each extract was collected, dissolved in 80% methanol, and freeze-dried until further use. |