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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 |
| Principal Investigator Name: | Te Ming (Paul) Tseng |
| Report Period: | December 15, 2022 |
| Project Status: |
| The deer browsing and insect damage data was collected following application of selected weed extracts. The deer browsing and insect leaf damage was visually estimated. The insect species and number were collected with shake cloth and swipe net for soybean plants in rows and spreading-planted soybean plants, respectively. Insect defoliation (%) among treatments in the field experiment at Pontotoc, MS, ranged from 4 to 15%. Coffee senna treated soybean leaves were significantly less defoliated (lesser leaf holes from insect feeding) than other treatments and were 2.5 times less defoliated than the control (soybean applied with water). Among the deer repellent treatments tested in the field, sicklepod extract resulted in the least deer browsing (32% reduction in browsing compared to control plots), followed by prickly sida and hemp sesbania. |