



2023 Soybean Insect Losses in the United States

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Abstract

Estimated insect management costs and losses due to insects and other invertebrates in soybean during the 2023 growing season were collected and compiled from 19 states to provide a record of insect pressure and management practices for the year. These annual estimates provide a historical record of pest pressure and insect management and have been compiled in some states since 2004. Participating states represented 58% of soybean acreage grown in the United States, with near 100% participation in southern states. Overall, the stink bug complex was the costliest insect pest in soybean followed by corn earworm and soybean looper. Total insect management costs were \$13.92 per acre, with estimated crop losses to insects at \$12.26 per acre, making the 2023 total costs plus losses \$26.18 per acre. An average of 0.7 foliar insecticide applications were made over all soybeans. State estimates varied widely, with insect management costs in four states averaging less than \$10/ac, while averaging more than \$35/ac in three states. Similarly, the estimated yield losses from insects ranged from less than \$2/ac in four states to more than \$40/ac in two states.

Key Words: soybean, yield loss, pest management

Introduction

Numerous insects cause injury to soybeans every year, often reducing yield and quality. To obtain an estimate of the impact of these insects at a state and national scale, the opinions of entomologists from each state regarding pest pressure and management strategy adoption are collected annually. Soybean insect loss estimates have been compiled annually since 2004 in Mississippi (Musser and Catchot 2008), with 18 other states beginning to make estimates between 2008 and 2023. These estimates are “best guesses” by university personnel, primarily entomologists, who have been involved in state-wide monitoring of soybean throughout the year. While the costs and losses estimated for an insect pest in any given year are somewhat subjective, these losses provide a historical record of pest pressure and management practices and an estimate of the economic impact of the various soybean pests. Over time, the changes in estimated losses and insecticide applications provide a record of shifts in insect pests and management practices. However, readers should be careful about making comparisons between individual states as these differences are a function of the people making the estimates in addition to actual differences in soybean insect management.

Materials and Methods

Statewide estimates were made based on informal communication of an author from each state with university faculty, Extension personnel, private crop consultants and/or industry professionals who were actively engaged in soybean production in that state (see appendices for submitted data from each state). Acreage, yield, and price data were drawn from Agricultural Statistics Service publications (USDA NASS) before final estimates were published, so values in the tables may differ from final NASS values. The estimates were placed in a spreadsheet to make the various calculations. Actual formulas used in the spreadsheet were published by Musser and

Catchot (2008). Additional columns were added for the 2013 losses, and these are defined in Musser et al. (2014).

Results and Discussion

Harvested acreage in the reporting states was 48.1 million acres (1 acre= 0.405 hectare), which represents 58% of the 83.6 million acres of soybean harvested in the United States during 2022 (USDA NASS). Nearly all southern soybean-producing states participated, while participation in the midwestern and northern states was about 50%. As a result, the overall averages of insect costs and losses in this report are likely greater than the true national averages because insect management costs and losses in the southern states are typically greater than in the northern states (Table 1). Average combined management costs and yield losses attributed to insects were estimated at \$26.18/ac for 2023, a decrease of about \$6 from 2022 (Musser et al 2023), but this varied widely among states and regions. Estimates for combined costs plus losses ranged from less than \$10/ac in Iowa and Michigan in the northern region to greater than \$60/ac in the southern region states of Arkansas, Mississippi, and South Carolina. Average yield losses from insects were estimated at 1.72% (0.94 bu/ac or 63 kg/ha), but this also varied from 0.0% in the northern state of Michigan to 6.3% in the southern state of Arkansas. The use of insecticide seed treatments was similar across all 3 regions, but crop scouting and the application of foliar insecticides was much more common in the southern region and declined in more northern regions. (Table 1).

State Highlights

Alabama. Pest pressure was lighter in 2023 than in previous years, resulting in a 35% decrease in insect costs + losses from 2022 (Musser et al. 2023). The stink bug complex, primarily southern green stink bug, remained the primary pest, accounting for 68% of insect costs + losses. Kudzu bug was the second most costly insect.

Table 1. Soybean insect management practices by region, 2023.

Region	Soybean Acres ¹ (x1000)	Yield (bu/ac)	% soybean acres		Average Number of Foliar Applications	Insect Impacts (\$/acre)	
			Scouted	Insecticide Seed Treatment		Management Costs	Yield Losses
North ²	29,768	57.3	19	70	0.40	8.00	3.03
Central ³	11,150	46.0	47	66	0.93	17.50	17.97
South ⁴	7,230	51.0	81	77	1.53	33.36	38.33
Average (weighted by acres)			35	70	0.69	13.92	12.26

¹ acre=0.405 ha

² Delaware, Illinois, Maryland, Michigan, Ohio, and Wisconsin

³ Kentucky, Missouri, North Carolina, Tennessee, and Virginia

⁴ Alabama, Arkansas, Georgia, Louisiana, Mississippi, South Carolina, and Texas

Arkansas. As has been true in previous years, corn earworm and stink bugs were the primary pests during 2023, combined accounting for 75% of all insect costs + losses.

Delaware/ Maryland. Maryland was included in the estimates this year for the first time. Estimates were combined for these states as many of the people involved in soybean production work in both states. Slugs, stink bugs, and corn earworm all caused similar levels of costs + losses and together were responsible for 73% of all insect costs + losses in 2023. Overall costs + losses were less in 2023 (\$40.12/ac) than reported for Delaware in 2021 (\$58.91/ac) or 2022 (\$62.84/ac) (Musser et al. 2022, 2023).

Georgia. As in 2021 and 2022, stink bugs, soybean looper, velvetbean caterpillar, and kudzu bug were the primary pests during 2023 (Musser et al 2022, 2023). These four pests combined to increase total costs + losses from \$31.10/ac in 2022 (Musser et al. 2023) to \$48.24/ac in 2023.

Illinois. Insecticide seed treatments and automatic insecticide applications continued to be the largest insect-related expenses in 2023, together accounting for 64% of all insect-related costs + losses. Spider mites, bean leaf beetle, and slugs remained the primary pests during 2023, as they were during 2022 (Musser et al. 2023).

Iowa. Overall costs + losses associated with insects were similar to 2022 at \$5.51/ac

(Musser et al 2023). Foliar applications were made on 18% of acreage, with 81% of the foliar applications being automatic applications. The costliest insect pest was Japanese beetle.

Kentucky. Bean leaf beetle, stink bugs, and threecornered alfalfa hopper were all similarly responsible for 67% of the \$40.74/ac of costs + losses. After causing substantial losses during 2022, slugs returned to being a minor pest of soybeans in 2023 (Musser et al. 2023).

Louisiana. Stink bugs and soybean looper remained the primary pests, together responsible for 76% of the total costs + losses. However, overall costs + losses were much less during 2023 (\$54.19/ac) than in any of the previous 3 years (>\$73/ac) (Musser et al. 2021, 2022, 2023).

Michigan. No yield losses from insects were reported in Michigan again during 2023. Insecticide seed treatments and automatic foliar insecticide applications were the primary insect management costs incurred, accounting for 90% of all insect-related costs.

Mississippi. As in previous years, the main insect pests were stink bug, corn earworm and soybean looper. However, the number of foliar insecticide applications (0.9/ac) and total losses + costs (\$69.26/ac) were down sharply in 2023 compared to recent years (2022 applications=2.5; Costs+ losses=\$112.38/ac; 2021 applications=2.5; costs + losses = \$93.87/ ac (Musser et al 2022, 2023).

Missouri. 2023 was the first year that Missouri provided insect loss estimates. Bean leaf beetle and stink bugs were the primary pests followed by green cloverworm and corn earworm.

North Carolina. The number of foliar applications (1.8/ac) and the estimated costs + losses (\$49.93/ac) declined in 2023 from 2022 (2.0 applications; \$68.27/ac) (Musser et al. 2023). Corn earworm remained the primary pest, followed by stink bugs.

Ohio. Total costs + losses decreased substantially for the second year in a row, falling from \$38.81/ac during 2021 to \$24.16/ac during 2022, to \$11.66/ac in 2023 (Musser et al. 2022, 2023). Japanese beetles, stink bugs, and slugs were the primary pests during 2023, together accounting for 98% of all costs + losses.

South Carolina. Stink bugs and soybean looper remained the costliest pests, together accounting for 66% of all costs + losses. Overall costs + losses were lower during 2023 (\$61.17/ac) than during 2021 (\$78.26/ac) or 2022 (\$72.56/ac) (Musser et al. 2022, 2023).

Tennessee. Stink bugs continued to be the primary pest in 2023, and overall costs + losses in 2023 (\$32.06/ac) were similar to 2022 (\$34.60/ac) (Musser et al. 2023).

Texas. Consistent with previous years, stink bug was the primary pest in 2023. Stink bug, primarily redbanded stink bug, was the only insect pest to cause any yield losses in a dry year with low yields.

Virginia. The top insect pests were stink bug, corn earworm, and soybean looper. Together, these three pests comprised 80% of all insect costs + losses. However, the costs + losses due to insects dropped from around \$100/ac in recent years to \$45.50/ac in 2023 (Musser et al. 2022, 2023)

Wisconsin. The armyworm complex and grasshoppers were the primary pests in 2023, together costing growers \$14.23/ac in costs + losses. This was a sharp increase from 2022 when no insect losses were reported (Musser et al. 2023).

Complete data for each state and all states combined are in the appendices following this report.

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USDA NASS. United States Department of Agriculture National Agricultural Statistics Service, Data and Statistics, <https://quickstats.nass.usda.gov/>.

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Appendix 1: Overall soybean insect losses from 19 reporting states, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	cost/acre	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost
Amywom complex	5,032,939	10.5%	841,114	1.7%	809,412	1.7%	0.94	\$10.02	0.48	0.016	\$0.16	0.05%	1,320,621	\$24,819,672	\$0.52	2.8%
Banded Cucumber Beetle	3,742,500	7.8%	23,000	0.0%	23,000	0.0%	1.00	\$10.00	0.00	0.000	\$0.00	0.00%	9,428	\$352,872	\$0.01	0.0%
Bean Leaf Beetle	26,718,018	55.5%	2,668,978	5.5%	2,221,672	4.6%	1.02	\$10.02	0.22	0.047	\$0.47	0.12%	3,268,697	\$65,206,013	\$1.35	7.3%
Blister Beetle	1,974,450	4.1%	336,500	0.7%	366,000	0.8%	1.00	\$9.47	0.02	0.008	\$0.07	0.00%	26,370	\$3,808,687	\$0.08	0.4%
Com Earworm	8,795,570	18.3%	3,577,264	7.4%	4,042,882	8.4%	1.03	\$15.03	2.45	0.086	\$1.30	0.45%	11,771,082	\$215,798,693	\$4.48	24.1%
Cutworms	2,668,150	5.5%	674,800	1.4%	411,250	0.9%	1.00	\$11.20	0.14	0.009	\$0.10	0.01%	203,920	\$7,264,963	\$0.15	0.8%
Decies Stem Borer	14,415,164	29.9%	72,816	0.2%	162,800	0.3%	0.89	\$8.67	0.19	0.003	\$0.03	0.06%	1,459,555	\$20,279,104	\$0.42	2.3%
Garden Webworms	707,050	1.5%	5,900	0.0%	14,750	0.0%	1.00	\$12.00	0.03	0.000	\$0.00	0.00%	12,024	\$333,707	\$0.01	0.0%
Grape Colaspis	7,448,875	15.5%	17,900	0.0%	17,900	0.0%	0.20	\$9.00	0.02	0.000	\$0.00	0.00%	62,168	\$842,466	\$0.02	0.1%
Grasshopper	28,187,100	58.5%	707,732	1.5%	532,738	1.1%	1.00	\$10.28	0.08	0.011	\$0.11	0.05%	1,244,280	\$21,694,704	\$0.45	2.4%
Green Cloverworm	32,326,146	67.1%	1,139,548	2.4%	931,180	1.9%	0.92	\$8.80	0.11	0.018	\$0.16	0.07%	1,880,399	\$32,038,688	\$0.67	3.6%
Japanese Beetle	25,359,138	52.7%	1,221,360	2.5%	1,012,552	2.1%	0.98	\$10.26	0.07	0.021	\$0.21	0.04%	978,171	\$22,949,804	\$0.48	2.6%
Kudzu Bug	8,082,500	16.8%	581,400	1.2%	400,550	0.8%	1.00	\$8.73	0.15	0.008	\$0.07	0.02%	655,641	\$12,042,099	\$0.25	1.3%
Lesser Comstalk Borer	128,900	0.3%	0	0.0%	0	0.0%	0.00	\$0.00	0.21	0.000	\$0.00	0.00%	14,756	\$192,322	\$0.00	0.0%
Mexican Bean Beetle	117,395	0.2%	643	0.0%	608	0.0%	0.00	\$10.00	0.29	0.000	\$0.00	0.00%	18,591	\$242,297	\$0.01	0.0%
Potato Leafhopper	7,637,200	15.9%	2,300	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	1,006	\$13,106	\$0.00	0.0%
Saltmarsh Caterpillar	7,966,450	16.5%	200,000	0.4%	86,950	0.2%	1.00	\$14.01	0.07	0.002	\$0.03	0.01%	317,536	\$5,356,587	\$0.11	0.6%
Seedcom Maggot	1,506,688	3.1%	2,819	0.0%	1,824	0.0%	1.00	\$50.00	0.03	0.000	\$0.00	0.00%	23,814	\$401,565	\$0.01	0.0%
Slugs	4,832,550	10.0%	442,386	0.9%	206,286	0.4%	0.96	\$34.18	0.58	0.004	\$0.14	0.06%	1,518,681	\$26,537,985	\$0.55	3.0%
Soybean Aphid	2,824,700	5.9%	39,615	0.1%	69,145	0.1%	1.00	\$7.28	0.02	0.001	\$0.01	0.00%	25,378	\$834,151	\$0.02	0.1%
Soybean Gall Midge	115,975	0.2%	995	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	68	\$886	\$0.00	0.0%
Soybean Looper	8,624,382	17.9%	2,747,252	5.7%	2,344,616	4.9%	0.89	\$17.48	0.77	0.043	\$0.76	0.14%	3,652,527	\$83,977,443	\$1.74	9.4%
Spider Mites	5,188,968	10.8%	744,338	1.5%	335,438	0.7%	1.00	\$10.24	0.22	0.007	\$0.07	0.02%	628,691	\$11,628,054	\$0.24	1.3%
Spotted Cucumber Beetle	24,912,400	51.7%	0	0.0%	0	0.0%	0.00	\$0.00	0.02	0.000	\$0.00	0.01%	221,248	\$2,863,549	\$0.06	0.3%
Stink Bugs (see box below)	25,352,538	52.7%	5,324,766	11.1%	5,733,968	11.9%	1.13	\$11.67	0.97	0.135	\$1.57	0.51%	13,389,103	\$250,185,317	\$5.20	27.9%
Thistle Caterpillar	1,741,000	3.6%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecomered Alfalfa Hopper	17,225,790	35.8%	836,550	1.7%	345,200	0.7%	0.78	\$7.56	0.18	0.006	\$0.04	0.06%	1,698,005	\$24,175,248	\$0.50	2.7%
Thrips	18,741,500	38.9%	8,550	0.0%	104,700	0.2%	1.00	\$7.87	0.01	0.002	\$0.02	0.00%	60,665	\$1,614,383	\$0.03	0.2%
Velvetbean Caterpillar	6,759,700	14.0%	817,800	1.7%	730,400	1.5%	0.73	\$8.59	0.23	0.011	\$0.09	0.03%	832,433	\$15,403,832	\$0.32	1.7%
Other	1,077,426	2.2%	16,582	0.0%	16,400	0.0%	1.00	\$8.00	0.00	0.000	\$0.00	0.00%	2,939	\$169,499	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	11,951,820	24.8%	1.02	\$3.64	0.00	0.253	\$0.92	0.00%	0	\$44,336,277	\$0.92	5.0%
TOTAL							0.691	\$6.33	1.72%	45,297,794	\$63.33	1.72%	45,297,794	\$895,383,974	\$18.60	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results		Stink Bug Composition		
State	Combined	Total Bushels Harvested	2,586,154,000	Foliar Insecticides Costs	Total \$305,012,568	Per Acre \$6.33	Species	% of SB
Year	2023	Total Bushels Lost to Insects	45,297,794	Seed Treatment Costs	\$243,627,648	\$5.06	Brown	38.6
Total Acres	48,148,000	Percent Yield Loss	1.72%	Scouting costs	\$121,427,803	\$2.52	Brown Marmorated	13.5
Yield/acre	53.71	Yield w/o Insects	54.65	Total Costs	\$670,068,018	\$13.92	Green	31.9
Price/Bushel	\$13.03	Ave. # Spray Applications	0.691	Yield Lost to insects	\$590,371,406	\$12.26	Redbanded	5.8
% Acres Scouted	35	Seed Treated Acres	33,675,830	Total Losses + Costs	\$1,260,439,424	\$26.18	Redshouldered	0.8
Scouting Fee/scouted acre	\$7.22	Scouted Acres	16,819,850				Southern Green	9.4
% Acres Insect Seed Trt.	70						Total	100.0
Seed Trt Cost/treated ac	\$7.23							

2023 SOYBEAN LOSSES

Appendix 2. Alabama soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	cost/acre	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost
Armyworm complex	1,725	0.5%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Cucumber Beetle	103,500	30.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	103,500	30.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Blister Beetle	3,450	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Com Earworm	186,300	54.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	3,450	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Dectes Stem Borer	6,900	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Garden Webworms	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grape Colaspis	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshopper	327,750	95.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Green Cloverworm	327,750	95.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Japanese Beetle	6,900	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Kudzu Bug	207,000	60.0%	69,000	20.0%	69,000	20.0%	1.00	\$8.50	0.50	0.200	\$1.70	0.30%	46,656	\$1,193,031	\$3.46	14.6%
Lesser Comstalk Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Mexican Bean Beetle	35	0.0%	35	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Potato Leafhopper	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Seedcorn Maggot	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Slugs	10,350	3.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Aphid	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Gall Midge	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Looper	69,000	20.0%	17,250	5.0%	51,750	15.0%	1.00	\$10.50	0.15	0.150	\$1.58	0.03%	4,666	\$604,028	\$1.75	7.4%
Spider Mites	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spotted Cucumber Beetle	69,000	20.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (see box below)	345,000	100.0%	103,500	30.0%	172,500	50.0%	1.00	\$8.50	2.00	0.500	\$4.25	2.00%	311,042	\$5,509,792	\$15.97	67.7%
Thistle Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecomered Alfalfa Hopper	345,000	100.0%	17,250	5.0%	3,450	1.0%	1.00	\$8.50	0.01	0.010	\$0.09	0.01%	1,555	\$49,543	\$0.14	0.6%
Thrips	345,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Velvetbean Caterpillar	120,750	35.0%	41,400	12.0%	51,750	15.0%	1.00	\$8.50	0.15	0.150	\$1.28	0.05%	8,165	\$546,018	\$1.58	6.7%
Other	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	69,000	20.0%	1.00	\$3.50	0.00	0.200	\$0.70	0.00%	0	\$241,500	\$0.70	3.0%
TOTAL							1.210			1.210	\$9.59	2.39%	372,084	\$8,143,912	\$23.61	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results		Stink Bug Composition		
State	AL	Total Bushels Harvested	15,180,000	Foliar Insecticides Costs	Total \$3,306,825	Per Acre \$9.59	Species	% of SB
Year	2023	Total Bushels Lost to Insects	372,084	Seed Treatment Costs	\$1,086,750	\$3.15	Brown	23
Total Acres	345,000	Percent Yield Loss	2.39%	Scouting costs	\$1,138,500	\$3.30	Brown Marmorated	5
Yield/acre	44	Yield w/o Insects	45.08	Total Costs	\$5,532,075	\$16.04	Green	5
Price/Bushel	\$13.00	Ave. # Spray Applications	1.210	Yield Lost to insects	\$4,837,087	\$14.02	Redbanded	2
% Acres Scouted	55	Seed Treated Acres	120,750	Total Losses + Costs	\$10,369,162	\$30.06	Redshouldered	0
Scouting Fee/scouted acre	\$6.00	Scouted Acres	189,750				Southern Green	65
% Acres Insect Seed Trt.	35						Total (make it 100%)	100
Seed Trt Cost/treated ac	\$9.00							

Appendix 3. Arkansas soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	cost/acre	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost
Amywom complex	442,500	15.0%	2,950	0.1%	2,950	0.1%	1.00	\$14.00	0.10	0.001	\$0.01	0.02%	25,039	\$391,094	\$0.13	0.2%
Banded Cucumber Beetle	29,500	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	2,950,000	100.0%	295,000	10.0%	442,500	15.0%	1.00	\$14.00	0.10	0.150	\$2.10	0.10%	166,926	\$8,526,958	\$2.89	3.8%
Blister Beetle	442,500	15.0%	59,000	2.0%	88,500	3.0%	1.00	\$12.50	0.10	0.030	\$0.38	0.02%	25,039	\$1,456,044	\$0.49	0.6%
Com Earworm	2,360,000	80.0%	885,000	30.0%	1,180,000	40.0%	1.00	\$18.00	3.30	0.400	\$7.20	2.64%	4,406,849	\$82,803,683	\$28.07	36.5%
Cutworms	118,000	4.0%	44,250	1.5%	59,000	2.0%	1.00	\$12.00	0.02	0.020	\$0.24	0.00%	1,335	\$726,656	\$0.25	0.3%
Diectes Stem Borer	1,770,000	60.0%	0	0.0%	29,500	1.0%	1.00	\$12.00	0.01	0.010	\$0.12	0.01%	10,016	\$493,917	\$0.17	0.2%
Garden Webworms	59,000	2.0%	5,900	0.2%	14,750	0.5%	1.00	\$12.00	0.10	0.005	\$0.06	0.00%	3,339	\$223,639	\$0.08	0.1%
Grape Coliaspis	2,950,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshopper	2,950,000	100.0%	59,000	2.0%	64,900	2.2%	1.00	\$14.00	0.05	0.022	\$0.31	0.05%	83,463	\$2,074,579	\$0.70	0.9%
Green Cloverworm	2,950,000	100.0%	2,950	0.1%	118,000	4.0%	1.00	\$12.00	0.01	0.040	\$0.48	0.01%	18,693	\$1,649,196	\$0.56	0.7%
Japanese Beetle	206,500	7.0%	0	0.0%	2,950	0.1%	1.00	\$0.00	0.00	0.001	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Kudzu Bug	324,500	11.0%	0	0.0%	0	0.0%	1.00	\$12.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lesser Cornstalk Borer	14,750	0.5%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Mexican Bean Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Potato Leafhopper	2,950,000	100.0%	0	0.0%	0	0.0%	1.00	\$12.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	2,360,000	80.0%	29,500	1.0%	35,400	1.2%	1.00	\$14.00	0.10	0.012	\$0.17	0.08%	133,541	\$2,361,166	\$0.80	1.0%
Seedcorn Maggot	147,500	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Slugs	147,500	5.0%	5,900	0.2%	2,950	0.1%	1.00	\$32.00	0.10	0.001	\$0.03	0.01%	8,346	\$210,998	\$0.07	0.1%
Soybean Aphid	29,500	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Gall Midge	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Looper	1,917,500	65.0%	590,000	20.0%	678,500	23.0%	1.00	\$21.00	1.00	0.230	\$4.83	0.65%	1,085,020	\$29,406,225	\$9.97	13.0%
Spider Mites	590,000	20.0%	5,900	0.2%	14,750	0.5%	1.00	\$14.00	0.01	0.005	\$0.07	0.00%	3,339	\$253,139	\$0.09	0.1%
Spotted Cucumber Beetle	2,950,000	100.0%	0	0.0%	0	0.0%	1.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (see box below)	2,950,000	100.0%	1,327,500	45.0%	1,504,500	51.0%	1.20	\$14.00	2.70	0.612	\$8.57	2.70%	4,507,005	\$88,238,457	\$29.91	38.9%
Thistle Caterpillar	29,500	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecornered Alfalfa Hopper	2,950,000	100.0%	29,500	1.0%	59,000	2.0%	1.00	\$12.00	0.02	0.020	\$0.24	0.02%	33,385	\$1,174,392	\$0.40	0.5%
Thrips	2,950,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Velvetbean Caterpillar	1,180,000	40.0%	29,500	1.0%	44,250	1.5%	1.00	\$12.00	0.10	0.015	\$0.18	0.04%	66,770	\$1,463,783	\$0.50	0.6%
Other	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	767,000	26.0%	1.00	\$7.00	0.00	0.260	\$1.82	0.00%	0	\$5,369,000	\$1.82	2.4%
TOTAL							1.834	\$26.81	6.34%	10,576,104	\$226,822,924	\$76.89	100.0%			

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results		Stink Bug Composition	
State	AR	Total Bushels Harvested	156,350,000	Total		Species	% of SB
Year	2023	Total Bushels Lost to Insects	10,576,104	Foliar Insecticides Costs	\$79,074,750	Brown	29
Total Acres	2,950,000	Percent Yield Loss	6.34%	Seed Treatment Costs	\$18,880,000	Brown Marmorated	2
Yield/acre	53	Yield w/o Insects	58.59	Scouting costs	\$22,587,500	Green	46
Price/Bushel	\$13.97	Ave. # Spray Applications	1.834	Total Costs	\$120,522,250	Redbanded	12
% Acres Scouted	85	Seed Treated Acres	2,360,000	Yield Lost to insects	\$147,748,174	Redshouldered	1
Scouting Fee/scouted acre	\$9.00	Scouted Acres	2,507,500	Total Losses + Costs	\$268,270,424	Southern Green	10
% Acres Insect Seed Trt.	80					Total (make it 100%)	100
Seed Trt Cost/treated ac	\$8.00						

2023 SOYBEAN LOSSES

Appendix 4. Delaware and Maryland soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/ acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	cost/acre	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost
Amywom complex	65,664	10.8%	4,864	0.8%	8,512	1.4%	1.00	\$10.00	0.01	0.014	\$0.14	0.00%	294	\$88,582	\$0.15	0.4%
Banded Cucumber Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	286,368	47.1%	21,888	3.6%	51,072	8.4%	1.00	\$10.00	0.40	0.084	\$0.84	0.19%	51,308	\$1,114,615	\$1.83	5.5%
Blister Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Corn Earworm	191,520	31.5%	65,664	10.8%	108,832	17.9%	1.00	\$19.00	2.20	0.179	\$3.40	0.69%	188,728	\$4,289,140	\$7.05	21.0%
Cutworms	30,400	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Diectes Stem Borer	232,864	38.3%	1,216	0.2%	0	0.0%	0.00	\$0.00	1.25	0.000	\$0.00	0.48%	130,380	\$1,534,578	\$2.52	7.5%
Garden Webworms	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grape Colaspis	30,400	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshopper	547,200	90.0%	17,632	2.9%	21,888	3.6%	1.00	\$10.00	0.05	0.036	\$0.36	0.05%	12,255	\$363,122	\$0.60	1.8%
Green Cloverworm	554,496	91.2%	18,848	3.1%	21,280	3.5%	1.00	\$10.00	0.05	0.035	\$0.35	0.05%	12,418	\$358,966	\$0.59	1.8%
Japanese Beetle	493,088	81.1%	12,160	2.0%	41,952	6.9%	1.00	\$10.00	0.02	0.069	\$0.69	0.02%	4,417	\$471,511	\$0.78	2.3%
Kudzu Bug	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lesser Comstalk Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Mexican Bean Beetle	12,160	2.0%	608	0.1%	608	0.1%	0.00	\$10.00	0.10	0.000	\$0.00	0.00%	545	\$6,411	\$0.01	0.0%
Potato Leafhopper	243,200	40.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	121,600	20.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Seedcorn maggot	21,888	3.6%	1,824	0.3%	1,824	0.3%	1.00	\$50.00	1.50	0.003	\$0.15	0.05%	14,706	\$264,291	\$0.43	1.3%
Slugs	243,200	40.0%	71,136	11.7%	40,736	6.7%	1.00	\$47.00	3.00	0.067	\$3.15	1.20%	326,802	\$5,761,054	\$9.48	28.2%
Soybean Aphid	91,200	15.0%	18,240	3.0%	0	0.0%	0.00	\$0.00	0.02	0.000	\$0.00	0.00%	817	\$9,616	\$0.02	0.0%
Soybean Gall Midge	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Looper	215,232	35.4%	11,552	1.9%	16,416	2.7%	1.00	\$15.25	0.10	0.027	\$0.41	0.04%	9,641	\$363,815	\$0.60	1.8%
Spider Mites	119,168	19.6%	6,688	1.1%	6,688	1.1%	1.00	\$12.00	0.10	0.011	\$0.13	0.02%	5,338	\$143,082	\$0.24	0.7%
Spotted Cucumber Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (see box below)	493,088	81.1%	77,216	12.7%	73,568	12.1%	1.01	\$13.00	1.50	0.122	\$1.59	1.22%	331,296	\$4,865,299	\$8.00	23.8%
Thistle Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecornered Alfalfa Hopper	48,640	8.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	608,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Velvetbean Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Other	426	0.1%	182	0.0%	0	0.0%	0.00	\$0.00	3.00	0.000	\$0.00	0.00%	572	\$6,731	\$0.01	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	419,520	69.0%	1.00	\$1.90	0.00	0.690	\$1.31	0.00%	0	\$797,088	\$1.31	3.9%
TOTAL									1.337		\$12.52	4.00%	1,089,518	\$20,437,899	\$33.61	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results		Stink Bug Composition	
State	DE/MD	Total Bushels Harvested	26,144,000	Total	\$7,614,276	Species	% of SB
Year	2023	Total Bushels Lost to insects	1,089,518	Per Acre	\$12.52	Brown	32
Total Acres	608,000	Percent Yield Loss	4.00%	Seed Treatment Costs	\$1,422,720	Brown Marmorated	17
Yield/acre	43	Yield w/o Insects	44.79	Scouting costs	\$2,530,800	Green	50
Price/Bushel	\$11.77	Ave. # Spray Applications	1.337	Total Costs	\$11,567,796	Redbanded	0
% Acres Scouted	45	Seed Treated Acres	218,880	Yield Lost to insects	\$12,823,624	Redshouldered	0
Scouting Fee/scouted acre	\$9.25	Scouted Acres	273,600	Total Losses + Costs	\$24,391,419	Southern Green	1
% Acres Insect Seed Trt.	36					Total (make it 100%)	100
Seed Trt Cost/treated ac	\$6.50						

Appendix 5. Georgia soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	cost/acre	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost
Armyworm complex	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Cucumber Beetle	46,500	30.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Blister Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Com Earworm	3,100	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	1.00	0.000	\$0.00	0.02%	1,337	\$17,387	\$0.11	0.3%
Cutworms	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Dectes Stem Borer	1,550	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Garden Webworms	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grape Colaspis	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshopper	7,750	5.0%	3,100	2.0%	1,550	1.0%	1.00	\$9.00	1.00	0.010	\$0.09	0.05%	3,344	\$57,418	\$0.37	0.8%
Green Cloverworm	31,000	20.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Japanese Beetle	3,100	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Kudzu Bug	93,000	60.0%	7,750	5.0%	4,650	3.0%	1.00	\$9.00	2.00	0.030	\$0.27	1.20%	80,248	\$1,085,078	\$7.00	16.0%
Lesser Cornstalk Borer	3,100	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	5.00	0.000	\$0.00	0.10%	6,687	\$86,936	\$0.56	1.3%
Mexican Bean Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Potato Leafhopper	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Seedcorn Maggot	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Slugs	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Aphid	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Gall Midge	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Looper	93,000	60.0%	46,500	30.0%	38,750	25.0%	1.30	\$16.00	2.00	0.325	\$5.20	1.20%	80,248	\$1,849,228	\$11.93	27.3%
Spider Mites	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spotted Cucumber Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (see box below)	131,750	85.0%	93,000	60.0%	77,500	50.0%	1.20	\$9.00	2.00	0.600	\$5.40	1.70%	113,685	\$2,314,907	\$14.93	34.2%
Thistle Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecornered Alfalfa Hopper	10,850	7.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	77,500	50.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Velvetbean Caterpillar	108,500	70.0%	15,500	10.0%	93,000	60.0%	1.00	\$8.00	1.00	0.600	\$4.80	0.70%	46,812	\$1,352,550	\$8.73	20.0%
Other	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL										1.565	\$15.76	4.97%	332,362	\$6,763,505	\$43.64	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results		Stink Bug Composition	
State	GA	Total Bushels Harvested	6,355,000	Total	Per Acre	Species	% of SB
Year	2023	Total Bushels Lost to Insects	332,362	Foliar Insecticides Costs	\$2,442,800	Brown	5
Total Acres	155,000	Percent Yield Loss	4.97%	Seed Treatment Costs	\$248,000	Brown Marmorated	2
Yield/acre	41	Yield w/o Insects	43.14	Scouting costs	\$465,000	Green	2
Price/Bushel	\$13.00	Ave. # Spray Applications	1.565	Total Costs	\$3,155,800	Redbanded	10
% Acres Scouted	50	Seed Treated Acres	31,000	Yield Lost to insects	\$4,320,705	Redshouldered	1
Scouting Fee/scouted acre	\$6.00	Scouted Acres	77,500	Total Losses + Costs	\$7,476,505	Southern Green	80
% Acres Insect Seed Trt.	20					Total (make it 100%)	100
Seed Trt Cost/treated ac	\$8.00						

2023 SOYBEAN LOSSES

Appendix 6. Illinois soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/ acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	cost/acre	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost
Amywom complex	517,500	5.0%	0	0.0%	51,750	0.5%	1.00	\$7.00	0.00	0.005	\$0.04	0.00%	0	\$362,250	\$0.04	0.8%
Banded Cucumber Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	9,315,000	90.0%	51,750	0.5%	310,500	3.0%	1.00	\$7.00	0.05	0.030	\$0.21	0.05%	284,718	\$5,846,358	\$0.56	12.2%
Blister Beetle	517,500	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Corn Earworm	310,500	3.0%	51,750	0.5%	31,050	0.3%	1.00	\$7.00	0.50	0.003	\$0.02	0.02%	94,906	\$1,441,636	\$0.14	3.0%
Cutworms	310,500	3.0%	10,350	0.1%	51,750	0.5%	1.00	\$7.00	0.01	0.005	\$0.04	0.00%	1,898	\$386,736	\$0.04	0.8%
Decies Stem Borer	2,587,500	25.0%	0	0.0%	51,750	0.5%	1.00	\$7.00	0.03	0.005	\$0.04	0.01%	47,453	\$974,393	\$0.09	2.0%
Garden Webworms	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grape Colaspis	103,500	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshopper	9,832,500	95.0%	0	0.0%	51,750	0.5%	1.00	\$7.00	0.00	0.005	\$0.04	0.00%	0	\$362,250	\$0.04	0.8%
Green Cloverworm	9,832,500	95.0%	31,050	0.3%	103,500	1.0%	1.00	\$7.00	0.01	0.010	\$0.07	0.01%	60,107	\$1,499,881	\$0.14	3.1%
Japanese Beetle	7,245,000	70.0%	0	0.0%	103,500	1.0%	1.00	\$7.00	0.00	0.010	\$0.07	0.00%	0	\$724,500	\$0.07	1.5%
Kudzu Bug	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lesser Comstalk Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Mexican Bean Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Potato Leafhopper	1,552,500	15.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	2,070,000	20.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Seedcorn Maggot	517,500	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Slugs	517,500	5.0%	10,350	0.1%	10,350	0.1%	1.00	\$65.00	1.00	0.001	\$0.07	0.05%	316,353	\$4,753,703	\$0.46	10.0%
Soybean Aphid	414,000	4.0%	0	0.0%	51,750	0.5%	1.00	\$7.00	0.00	0.005	\$0.04	0.00%	0	\$362,250	\$0.04	0.8%
Soybean Gall Midge	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Looper	310,500	3.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	1,552,500	15.0%	51,750	0.5%	103,500	1.0%	1.00	\$9.00	0.50	0.010	\$0.09	0.08%	474,529	\$7,052,929	\$0.68	14.8%
Spotted Cucumber Beetle	7,762,500	75.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (see box below)	6,210,000	60.0%	103,500	1.0%	310,500	3.0%	1.00	\$7.50	0.02	0.030	\$0.23	0.01%	75,925	\$3,308,179	\$0.32	6.9%
Thistle Caterpillar	1,035,000	10.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecomered Alfalfa Hopper	517,500	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	1,035,000	10.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Velvetbean Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Other	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	5,175,000	50.0%	1.00	\$4.00	0.00	0.500	\$2.00	0.00%	0	\$20,700,000	\$2.00	43.3%
TOTAL										0.619	\$2.93	0.21%	1,355,889	\$47,775,064	\$4.62	100.0%

SUMMARY DATA

Data Input	
State	IL
Year	2023
Total Acres	10,350,000
Yield/acre	61
Price/Bushel	\$12.90
% Acres Scouted	15
Scouting Fee/scouted acre	\$7.00
% Acres Insect Seed Trt.	55
Seed Trt Cost/treated ac	\$8.00

Yield & Management Results	
Total Bushels Harvested	631,350,000
Total Bushels Lost to Insects	1,355,889
Percent Yield Loss	0.21%
Yield w/o Insects	61.13
Ave. # Spray Applications	0.619
Seed Treated Acres	5,692,500
Scouted Acres	1,552,500

Economic Results		
	Total	Per Acre
Foliar Insecticides Costs	\$30,284,100	\$2.93
Seed Treatment Costs	\$45,540,000	\$4.40
Scouting costs	\$10,867,500	\$1.05
Total Costs	\$86,691,600	\$8.38
Yield Lost to insects	\$17,490,964	\$1.69
Total Losses + Costs	\$104,182,564	\$10.07

Stink Bug Composition	
Species	% of SB
Brown	60
Brown Marmorated	15
Green	23
Redbanded	0
Redshouldered	2
Southern Green	0
Total (make it 100%)	100

Appendix 7. Iowa soybean insect losses. 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/ acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	cost/acre	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost
Amywom complex	1,492,500	15.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Cucumber Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	497,500	5.0%	99,500	1.0%	0	0.0%	0.00	\$0.00	0.01	0.000	\$0.00	0.00%	1,444	\$19,055	\$0.00	0.1%
Blister Beetle	99,500	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Corn Earworm	99,500	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	199,000	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Dectes Stem Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Garden Webworms	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grape Colaspis	4,975	0.1%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshopper	7,462,500	75.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.01	0.000	\$0.00	0.01%	43,306	\$571,644	\$0.06	4.5%
Green Clovenwom	8,457,500	85.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Japanese Beetle	7,960,000	80.0%	149,250	1.5%	248,750	2.5%	1.00	\$10.00	0.05	0.025	\$0.25	0.04%	230,967	\$5,536,269	\$0.56	43.4%
Kudzu Bug	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lesser Comstalk Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Mexican Bean Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Potato Leafhopper	497,500	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Seedcorn Maggot	497,500	5.0%	995	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Slugs	497,500	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Aphid	597,000	6.0%	4,975	0.1%	995	0.0%	1.00	\$10.00	0.05	0.000	\$0.00	0.00%	17,323	\$238,608	\$0.02	1.9%
Soybean Gall Midge	4,975	0.1%	995	0.0%	0	0.0%	0.00	\$0.00	0.03	0.000	\$0.00	0.00%	72	\$953	\$0.00	0.0%
Soybean Looper	248,750	2.5%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	746,250	7.5%	497,500	5.0%	99,500	1.0%	1.00	\$10.00	0.03	0.010	\$0.10	0.00%	10,827	\$1,137,911	\$0.11	8.9%
Spotted Cucumber Beetle	995,000	10.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (see box below)	2,487,500	25.0%	99,500	1.0%	0	0.0%	0.00	\$0.00	0.01	0.000	\$0.00	0.00%	14,435	\$190,548	\$0.02	1.5%
Thistle Caterpillar	497,500	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecornered Alfalfa Hopper	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	497,500	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Velvetbean Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Other	995,000	10.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	1,442,750	14.5%	1.00	\$3.50	0.00	0.145	\$0.51	0.00%	0	\$5,049,625	\$0.51	39.6%
TOTAL										0.180	\$0.86	0.06%	318,374	\$12,744,613	\$1.28	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results		Stink Bug Composition	
State	IA	Total Bushels Harvested	577,100,000	Total	Per Acre	Species	% of SB
Year	2023	Total Bushels Lost to Insects	318,374	Foliar Insecticides Costs	\$8,542,075	Brown	75
Total Acres	9,950,000	Percent Yield Loss	0.06%	Seed Treatment Costs	\$32,835,000	Brown Mamorated	10
Yield/acre	58	Yield w/o Insects	58.03	Scouting costs	\$9,253,500	Green	15
Price/Bushel	\$13.20	Ave. # Spray Applications	0.180	Total Costs	\$50,630,575	Redbanded	0
% Acres Scouted	15	Seed Treated Acres	8,756,000	Yield Lost to insects	\$4,202,538	Redshouldered	0
Scouting Fee/scouted acre	\$6.20	Scouted Acres	1,492,500	Total Losses + Costs	\$54,833,113	Southern Green	0
% Acres Insect Seed Trt.	88					Total (make it 100%)	100
Seed Trt Cost/treated ac	\$3.75						

2023 SOYBEAN LOSSES

Appendix 8. Kentucky soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	cost/acre	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost
Amyworm complex	17,900	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Cucumber Beetle	358,000	20.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	1,790,000	100.0%	447,500	25.0%	268,500	15.0%	0.70	\$9.00	0.75	0.105	\$0.95	0.75%	764,569	\$11,554,492	\$6.46	24.0%
Blister Beetle	107,400	6.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Com Earworm	179,000	10.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	35,800	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Defces Stem Borer	1,074,000	60.0%	71,600	4.0%	35,800	2.0%	0.50	\$9.00	0.80	0.010	\$0.09	0.48%	489,324	\$6,473,383	\$3.62	13.5%
Garden Webworms	179,000	10.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grape Colaspis	895,000	50.0%	17,900	1.0%	17,900	1.0%	0.20	\$9.00	0.05	0.002	\$0.02	0.03%	25,486	\$360,985	\$0.20	0.8%
Grasshopper	537,000	30.0%	17,900	1.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Green Cloverworm	1,074,000	60.0%	89,500	5.0%	53,700	3.0%	1.00	\$9.00	0.40	0.030	\$0.27	0.24%	244,662	\$3,639,441	\$2.03	7.6%
Japanese Beetle	1,074,000	60.0%	35,800	2.0%	35,800	2.0%	0.50	\$9.00	0.05	0.010	\$0.09	0.03%	30,583	\$555,618	\$0.31	1.2%
Kudzu Bug	107,400	6.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lesser Comstalk Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Mexican Bean Beetle	17,900	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Potato Leafhopper	35,800	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Seedcom Maggot	35,800	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.30	0.000	\$0.00	0.01%	6,117	\$78,904	\$0.04	0.2%
Slugs	89,500	5.0%	17,900	1.0%	17,900	1.0%	0.50	\$15.00	0.20	0.005	\$0.08	0.01%	10,194	\$265,756	\$0.15	0.6%
Soybean Aphid	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Gall Midge	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Looper	1,163,500	65.0%	107,400	6.0%	0	0.0%	0.00	\$9.00	0.50	0.000	\$0.00	0.33%	331,313	\$4,273,941	\$2.39	8.9%
Spider Mites	17,900	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spotted Cucumber Beetle	1,790,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (see box below)	1,790,000	100.0%	53,700	3.0%	35,800	2.0%	0.80	\$9.00	0.80	0.016	\$0.14	0.80%	815,540	\$10,778,231	\$6.02	22.4%
Thistle Caterpillar	179,000	10.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecomered Alfalfa Hopper	1,700,500	95.0%	214,800	12.0%	17,900	1.0%	0.50	\$9.00	0.80	0.005	\$0.05	0.76%	774,763	\$10,074,998	\$5.63	21.0%
Thrips	1,700,500	95.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Velvetbean Caterpillar	53,700	3.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Other	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL										0.183	\$1.68	3.43%	3,492,552	\$48,055,749	\$26.85	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results		Stink Bug Composition	
State	KY	Total Bushels Harvested	98,450,000	Foliar Insecticides Costs	Total \$3,001,830	Species	% of SB
Year	2023	Total Bushels Lost to Insects	3,492,552	Seed Treatment Costs	\$14,982,300	Brown	35
Total Acres	1,790,000	Percent Yield Loss	3.43%	Scouting costs	\$9,889,750	Brown Marmorated	29
Yield/acre	55	Yield w/o Insects	56.95	Total Costs	\$27,873,880	Green	31
Price/Bushel	\$12.90	Ave. # Spray Applications	0.183	Yield Lost to insects	\$45,053,919	Redbanded	0
% Acres Scouted	65	Seed Treated Acres	1,611,000	Total Losses + Costs	\$72,927,799	Redshouldered	1
Scouting Fee/scouted acre	\$8.50	Scouted Acres	1,163,500			Southern Green	4
% Acres Insect Seed Trt.	90					Total (make it 100%)	100
Seed Trt Cost/treated ac	\$9.30						

Appendix 9. Louisiana soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/ acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	cost/acre	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost
Amywom complex	400,000	40.0%	100,000	10.0%	100,000	10.0%	0.50	\$7.20	0.10	0.050	\$0.36	0.04%	16,883	\$577,789	\$0.58	1.3%
Banded Cucumber Beetle	1,000,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	10,000	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Blister Beetle	5,000	0.5%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Com Earworm	600,000	60.0%	250,000	25.0%	250,000	25.0%	1.00	\$16.80	0.40	0.250	\$4.20	0.24%	101,297	\$5,506,733	\$5.51	12.7%
Cutworms	50,000	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Dectes Stem Borer	500,000	50.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Garden Webworms	3,000	0.3%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grape Colaspis	1,000,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshopper	150,000	15.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Green Cloverworm	250,000	25.0%	150,000	15.0%	150,000	15.0%	0.50	\$7.20	0.20	0.075	\$0.54	0.05%	21,104	\$812,236	\$0.81	1.9%
Japanese Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Kudzu Bug	10,000	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lesser Cornstalk Borer	10,000	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Mexican Bean Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Potato Leafhopper	100,000	10.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	50,000	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Seedcom Maggot	50,000	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Slugs	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Aphid	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Gall Midge	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Looper	800,000	80.0%	600,000	60.0%	550,000	55.0%	0.50	\$16.80	1.10	0.275	\$4.62	0.88%	371,423	\$9,411,353	\$9.41	21.7%
Spider Mites	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spotted Cucumber Beetle	1,000,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (see box below)	1,000,000	100.0%	700,000	70.0%	800,000	80.0%	1.50	\$13.82	1.30	1.200	\$16.58	1.30%	548,693	\$23,662,135	\$23.66	54.6%
Thistle Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecomered Alfalfa Hopper	1,000,000	100.0%	100,000	10.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Velvetbean Caterpillar	700,000	70.0%	600,000	60.0%	400,000	40.0%	0.50	\$7.20	0.50	0.200	\$1.44	0.35%	147,725	\$3,345,652	\$3.35	7.7%
Other	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	30,000	3.0%	0.25	\$7.20	0.00	0.008	\$0.05	0.00%	0	\$54,000	\$0.05	0.1%
TOTAL										2.058	\$27.80	2.86%	1,207,124	\$43,369,896	\$43.37	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results		Stink Bug Composition		
State	LA	Total Bushels Harvested	41,000,000	Foliar Insecticides Costs	Total \$27,798,000	Per Acre \$27.80	Species	% of SB
Year	2023	Total Bushels Lost to Insects	1,207,124	Seed Treatment Costs	\$5,220,000	\$5.22	Brown	25
Total Acres	1,000,000	Percent Yield Loss	2.86%	Scouting costs	\$5,600,000	\$5.60	Brown Mamorated	0
Yield/acre	41	Yield w/o Insects	42.21	Total Costs	\$38,618,000	\$38.62	Green	10
Price/Bushel	\$12.90	Ave. # Spray Applications	2.058	Yield Lost to insects	\$15,571,896	\$15.57	Redbanded	50
% Acres Scouted	80	Seed Treated Acres	900,000	Total Losses + Costs	\$54,189,896	\$54.19	Redshouldered	0
Scouting Fee/scouted acre	\$7.00	Scouted Acres	800,000				Southern Green	15
% Acres Insect Seed Trt.	90						Total (make it 100%)	100
Seed Trt Cost/treated ac	\$5.80							

2023 SOYBEAN LOSSES

Appendix 10. Michigan soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/ acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	cost/acre	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost
Amywom complex	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Cucumber Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	1,515,000	75.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Blister Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Com Earworm	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Dectes Stem Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Garden Webworms	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grape Colaspis	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshopper	505,000	25.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Green Cloverworm	101,000	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Japanese Beetle	202,000	10.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Kudzu Bug	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lesser Cornstalk Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Mexican Bean Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Potato Leafhopper	1,212,000	60.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Seedcom Maggot	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Slugs	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Aphid	1,212,000	60.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Gall Midge	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Looper	101,000	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	404,000	20.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spotted Cucumber Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (see box below)	202,000	10.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thistle Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecomered Alfalfa Hopper	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Velvetbean Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Other	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	202,000	10.0%	1.00	\$9.00	0.00	0.100	\$0.90	0.00%	0	\$1,818,000	\$0.90	100.0%
TOTAL										0.100	\$0.90	0.00%	0	\$1,818,000	\$0.90	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results			Stink Bug Composition	
State	MI	Total Bushels Harvested	92,920,000	Foliar Insecticides Costs	Total \$1,818,000	Per Acre \$0.90	Species	% of SB
Year	2023	Total Bushels Lost to Insects	0	Seed Treatment Costs	\$12,120,000	\$6.00	Brown	70
Total Acres	2,020,000	Percent Yield Loss	0.00%	Scouting costs	\$1,547,320	\$0.77	Brown Mamorated	15
Yield/acre	46	Yield w/o Insects	46.00	Total Costs	\$15,485,320	\$7.67	Green	15
Price/Bushel	\$13.55	Ave. # Spray Applications	0.100	Yield Lost to insects	\$0	\$0.00	Redbanded	0
% Acres Scouted	20	Seed Treated Acres	1,515,000	Total Losses + Costs	\$15,485,320	\$7.67	Redshouldered	0
Scouting Fee/scouted acre	\$3.83	Scouted Acres	404,000				Southern Green	0
% Acres Insect Seed Trt.	75						Total (make it 100%)	100
Seed Trt Cost/treated ac	\$8.00							

Appendix 11. Mississippi soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/ acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost
Amyworm complex	230,000	10.0%	46,000	2.0%	46,000	2.0%	1.00	\$13.00	0.25	0.020	\$0.26	0.03%	\$1,079,111	\$0.47	0.8%
Banded Cucumber Beetle	1,725,000	75.0%	23,000	1.0%	23,000	1.0%	1.00	\$10.00	0.01	0.010	\$0.10	0.01%	\$374,333	\$0.16	0.3%
Bean Leaf Beetle	1,725,000	75.0%	23,000	1.0%	23,000	1.0%	1.00	\$12.00	0.05	0.010	\$0.12	0.04%	\$997,666	\$0.43	0.8%
Blister Beetle	11,500	0.5%	0	0.0%	0	0.0%	0.00	\$0.00	0.01	0.000	\$0.00	0.00%	\$962	\$0.00	0.0%
Corn Earworm	1,150,000	50.0%	575,000	25.0%	345,000	15.0%	1.00	\$21.00	3.50	0.150	\$3.15	1.75%	\$40,922,743	\$17.79	31.8%
Cutworms	345,000	15.0%	23,000	1.0%	23,000	1.0%	1.00	\$9.00	0.10	0.010	\$0.09	0.02%	\$495,666	\$0.22	0.4%
Decetes Stem Borer	1,150,000	50.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.10	0.000	\$0.00	0.05%	\$962,221	\$0.42	0.7%
Garden Webworms	161,000	7.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.10	0.000	\$0.00	0.01%	\$134,711	\$0.06	0.1%
Grape Colaspis	690,000	30.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.10	0.000	\$0.00	0.03%	\$577,333	\$0.25	0.4%
Grasshopper	1,150,000	50.0%	115,000	5.0%	23,000	1.0%	1.00	\$9.00	0.10	0.010	\$0.09	0.05%	\$1,169,221	\$0.51	0.9%
Green Cloverworm	460,000	20.0%	115,000	5.0%	46,000	2.0%	1.00	\$13.00	0.25	0.020	\$0.26	0.05%	\$1,560,221	\$0.68	1.2%
Japanese Beetle	46,000	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.01	0.000	\$0.00	0.00%	\$3,849	\$0.00	0.0%
Kudzu Bug	690,000	30.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.01	0.000	\$0.00	0.00%	\$57,733	\$0.03	0.0%
Lesser Comstalk Borer	2,300	0.1%	0	0.0%	0	0.0%	0.00	\$0.00	5.00	0.000	\$0.00	0.01%	\$96,222	\$0.04	0.1%
Mexican Bean Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	\$0	\$0.00	0.0%
Potato Leafhopper	184,000	8.0%	2,300	0.1%	0	0.0%	0.00	\$0.00	0.01	0.000	\$0.00	0.00%	\$15,396	\$0.01	0.0%
Saltmarsh Caterpillar	460,000	20.0%	115,000	5.0%	46,000	2.0%	1.00	\$14.50	0.75	0.020	\$0.29	0.15%	\$3,553,664	\$1.55	2.8%
Seedcorn Maggot	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	\$0	\$0.00	0.0%
Slugs	276,000	12.0%	23,000	1.0%	0	0.0%	0.00	\$0.00	1.00	0.000	\$0.00	0.12%	\$2,309,331	\$1.00	1.8%
Soybean Aphid	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	\$0	\$0.00	0.0%
Soybean Gall Midge	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	\$0	\$0.00	0.0%
Soybean Looper	1,150,000	50.0%	575,000	25.0%	345,000	15.0%	1.00	\$18.00	1.50	0.150	\$2.70	0.75%	\$20,643,319	\$8.98	16.0%
Spider Mites	46,000	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.10	0.000	\$0.00	0.00%	\$38,489	\$0.02	0.0%
Spotted Cucumber Beetle	1,725,000	75.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.10	0.000	\$0.00	0.08%	\$1,443,332	\$0.63	1.1%
Stink Bugs (see box below)	1,725,000	75.0%	690,000	30.0%	460,000	20.0%	1.00	\$13.50	2.50	0.200	\$2.70	1.88%	\$42,293,297	\$18.39	32.9%
Thistle Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	\$0	\$0.00	0.0%
Threecornered Alfalfa Hopper	1,725,000	75.0%	23,000	1.0%	0	0.0%	0.00	\$0.00	0.01	0.000	\$0.00	0.01%	\$144,333	\$0.06	0.1%
Thrips	1,725,000	75.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	\$0	\$0.00	0.0%
Velvetbean Caterpillar	460,000	20.0%	115,000	5.0%	46,000	2.0%	1.00	\$13.00	1.50	0.020	\$0.26	0.30%	\$6,371,327	\$2.77	5.0%
Other	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	\$0	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	690,000	30.0%	1.00	\$5.00	0.00	0.300	\$1.50	0.00%	\$3,450,000	\$1.50	2.7%
TOTAL									0.920		\$11.52	5.31%	7,481,587	\$55.95	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results		Stink Bug Composition		
State	MS	Total Bushels Harvested	133,400,000	Foliar Insecticides Costs	Total \$26,496,000	Per Acre \$11.52	Species	% of SB
Year	2023	Total Bushels Lost to Insects	7,481,587	Seed Treatment Costs	\$16,560,000	\$7.20	Brown	17
Total Acres	2,300,000	Percent Yield Loss	5.31%	Scouting costs	\$14,053,000	\$6.11	Brown Marmorated	2
Yield/acre	58	Yield w/o Insects	61.25	Total Costs	\$57,109,000	\$24.83	Green	25
Price/Bushel	\$13.66	Ave. # Spray Applications	0.920	Yield Lost to insects	\$102,198,480	\$44.43	Redbanded	30
% Acres Scouted	94	Seed Treated Acres	1,840,000	Total Losses + Costs	\$159,307,480	\$69.26	Redshouldered	1
Scouting Fee/scouted acre	\$6.50	Scouted Acres	2,162,000				Southern Green	25
% Acres Insect Seed Trt.	80						Total (make it 100%)	100
Seed Trt Cost/treated ac	\$9.00							

2023 SOYBEAN LOSSES

Appendix 12. Missouri soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	cost/acre	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost
Amyworm complex	277,500	5.0%	111,000	2.0%	111,000	2.0%	1.00	\$11.50	0.50	0.020	\$0.23	0.03%	63,741	\$2,070,077	\$0.37	1.9%
Banded Cucumber Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	4,995,000	90.0%	1,110,000	20.0%	832,500	15.0%	1.00	\$10.00	0.50	0.150	\$1.50	0.45%	1,147,340	\$22,609,388	\$4.07	21.2%
Blister Beetle	388,500	7.0%	277,500	5.0%	277,500	5.0%	1.00	\$8.50	0.01	0.050	\$0.43	0.00%	1,785	\$2,380,970	\$0.43	2.2%
Corn Earworm	1,110,000	20.0%	666,000	12.0%	666,000	12.0%	1.00	\$12.00	0.90	0.120	\$1.44	0.18%	458,936	\$13,705,755	\$2.47	12.8%
Cutworms	832,500	15.0%	555,000	10.0%	277,500	5.0%	1.00	\$12.00	0.02	0.050	\$0.60	0.00%	7,649	\$3,425,229	\$0.62	3.2%
Diectes Stem Borer	4,995,000	90.0%	0	0.0%	27,750	0.5%	1.00	\$8.25	0.20	0.005	\$0.04	0.18%	458,936	\$5,942,693	\$1.07	5.6%
Garden Webwoms	55,500	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grape Coliaspis	1,110,000	20.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshopper	2,775,000	50.0%	111,000	2.0%	27,750	0.5%	1.00	\$8.50	0.03	0.005	\$0.04	0.02%	38,245	\$712,021	\$0.13	0.7%
Green Cloverworm	4,995,000	90.0%	555,000	10.0%	277,500	5.0%	1.00	\$8.50	0.40	0.050	\$0.43	0.36%	917,872	\$13,786,260	\$2.48	12.9%
Japanese Beetle	4,717,500	85.0%	832,500	15.0%	277,500	5.0%	1.00	\$8.50	0.06	0.050	\$0.43	0.05%	130,032	\$3,977,647	\$0.72	3.7%
Kudzu Bug	4,717,500	85.0%	277,500	5.0%	111,000	2.0%	1.00	\$8.50	0.03	0.020	\$0.17	0.03%	65,016	\$1,752,949	\$0.32	1.6%
Lesser Comstalk Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Mexican Bean Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Potato Leafhopper	166,500	3.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	2,220,000	40.0%	55,500	1.0%	5,550	0.1%	1.00	\$10.00	0.00	0.001	\$0.01	0.00%	0	\$55,500	\$0.01	0.1%
Seedcorn Maggot	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Slugs	555,000	10.0%	111,000	2.0%	27,750	0.5%	1.00	\$32.00	0.20	0.005	\$0.16	0.02%	50,993	\$1,522,862	\$0.27	1.4%
Soybean Aphid	277,500	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Gall Midge	111,000	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Looper	555,000	10.0%	166,500	3.0%	111,000	2.0%	1.00	\$13.00	0.05	0.020	\$0.26	0.01%	12,748	\$1,601,715	\$0.29	1.5%
Spider Mites	832,500	15.0%	166,500	3.0%	111,000	2.0%	1.00	\$11.00	0.40	0.020	\$0.22	0.06%	152,979	\$3,125,585	\$0.56	2.9%
Spotted Cucumber Beetle	5,550,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (see box below)	4,162,500	75.0%	555,000	10.0%	666,000	12.0%	1.00	\$7.75	0.60	0.120	\$0.93	0.45%	1,147,340	\$19,445,888	\$3.50	18.2%
Thistle Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecornered Alfalfa Hopper	5,550,000	100.0%	277,500	5.0%	138,750	2.5%	1.00	\$7.75	0.20	0.025	\$0.19	0.20%	509,929	\$7,423,929	\$1.34	7.0%
Thrips	5,550,000	100.0%	0	0.0%	55,500	1.0%	1.00	\$7.75	0.02	0.010	\$0.08	0.02%	50,993	\$1,064,987	\$0.19	1.0%
Velvetbean Caterpillar	3,607,500	65.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Other	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	693,750	12.5%	1.00	\$3.00	0.00	0.125	\$0.38	0.00%	0	\$2,081,250	\$0.38	2.0%
TOTAL									0.846		\$7.53	2.05%	5,214,535	\$106,684,707	\$19.22	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results		Stink Bug Composition	
State	MO	Total Bushels Harvested	249,750,000	Total	Per Acre	Species	% of SB
Year	2023	Total Bushels Lost to Insects	5,214,535	Foliar Insecticides Costs	\$41,763,750	Brown	20
Total Acres	5,550,000	Percent Yield Loss	2.05%	Seed Treatment Costs	\$33,300,000	Brown Marmorated	20
Yield/acre	45	Yield w/o Insects	45.94	Scouting costs	\$20,812,500	Green	50
Price/Bushel	\$12.45	Ave. # Spray Applications	0.846	Total Costs	\$95,876,250	Redbanded	0
% Acres Scouted	50	Seed Treated Acres	4,162,500	Yield Lost to insects	\$64,920,957	Redshouldered	0
Scouting Fee/scouted acre	\$7.50	Scouted Acres	2,775,000	Total Losses + Costs	\$160,797,207	Southern Green	10
% Acres Insect Seed Trt.	75					Total (make it 100%)	100
Seed Trt Cost/treated ac	\$8.00						

Appendix 13. North Carolina soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/ acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost
Armyworm complex	344,400	21.0%	32,800	2.0%	65,600	4.0%	1.00	\$12.00	0.50	0.040	0.11%	71,061	\$1,710,988	\$1.04	2.2%
Banded Cucumber Beetle	0	0.0%	0	0.0%	0	0.0%	1.00	\$0.00	0.00	0.000	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	1,082,400	66.0%	459,200	28.0%	229,600	14.0%	1.50	\$8.00	0.60	0.210	0.40%	268,000	\$6,239,202	\$3.80	8.2%
Blister Beetle	229,600	14.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	0.00%	0	\$0	\$0.00	0.0%
Corn Earworm	1,082,400	66.0%	721,600	44.0%	1,066,000	65.0%	1.10	\$12.00	5.00	0.715	3.30%	2,233,335	\$43,104,552	\$26.28	56.5%
Cutworms	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	0.00%	0	\$0	\$0.00	0.0%
Defeces Stem Borer	229,600	14.0%	0	0.0%	16,400	1.0%	1.00	\$8.00	0.10	0.010	0.01%	9,475	\$254,372	\$0.16	0.3%
Garden Webworms	147,600	9.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	0.00%	0	\$0	\$0.00	0.0%
Grape Colaspis	328,000	20.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	0.00%	0	\$0	\$0.00	0.0%
Grasshopper	344,400	21.0%	65,600	4.0%	65,600	4.0%	1.00	\$8.00	0.10	0.040	0.02%	14,212	\$709,558	\$0.43	0.9%
Green Cloverworm	1,164,400	71.0%	49,200	3.0%	49,200	3.0%	1.00	\$8.00	0.10	0.030	0.07%	48,051	\$1,018,257	\$0.62	1.3%
Japanese Beetle	278,800	17.0%	82,000	5.0%	65,600	4.0%	1.00	\$8.00	0.25	0.040	0.04%	28,763	\$898,714	\$0.55	1.2%
Kudzu Bug	229,600	14.0%	16,400	1.0%	16,400	1.0%	1.00	\$8.00	0.10	0.010	0.01%	9,475	\$254,372	\$0.16	0.3%
Lesser Comstalk Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	0.00%	0	\$0	\$0.00	0.0%
Mexican Bean Beetle	65,600	4.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.50	0.000	0.02%	13,535	\$175,960	\$0.11	0.2%
Potato Leafhopper	295,200	18.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	262,400	16.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	0.00%	0	\$0	\$0.00	0.0%
Seedcorn Maggot	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	0.00%	0	\$0	\$0.00	0.0%
Slugs	1,640,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	0.00%	0	\$0	\$0.00	0.0%
Soybean Aphid	147,600	9.0%	16,400	1.0%	16,400	1.0%	1.00	\$8.00	0.10	0.010	0.01%	6,091	\$210,382	\$0.13	0.3%
Soybean Gall Midge	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	0.00%	0	\$0	\$0.00	0.0%
Soybean Looper	672,400	41.0%	360,800	22.0%	295,200	18.0%	1.00	\$12.00	0.50	0.180	0.21%	138,737	\$5,345,987	\$3.26	7.0%
Spider Mites	229,600	14.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	0.00%	0	\$0	\$0.00	0.0%
Spotted Cucumber Beetle	426,400	26.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.05	0.000	0.01%	8,798	\$114,374	\$0.07	0.1%
Stink Bugs (see box below)	984,000	60.0%	574,000	35.0%	393,600	24.0%	1.10	\$8.00	2.00	0.264	1.20%	812,122	\$14,021,262	\$8.55	18.4%
Thistle Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	0.00%	0	\$0	\$0.00	0.0%
Threecornered Alfalfa Hopper	885,600	54.0%	82,000	5.0%	65,600	4.0%	0.00	\$0.00	0.10	0.000	0.05%	36,545	\$475,091	\$0.29	0.6%
Thrips	1,640,000	100.0%	0	0.0%	49,200	3.0%	1.00	\$8.00	0.00	0.030	0.00%	0	\$393,600	\$0.24	0.5%
Velvetbean Caterpillar	82,000	5.0%	16,400	1.0%	16,400	1.0%	1.00	\$8.00	0.50	0.010	0.03%	16,919	\$351,150	\$0.21	0.5%
Other	82,000	5.0%	16,400	1.0%	16,400	1.0%	1.00	\$8.00	0.05	0.010	0.00%	1,692	\$153,195	\$0.09	0.2%
Automatic (no insects)	0	0.0%	0	0.0%	278,800	17.0%	1.00	\$3.00	0.00	0.170	0.00%	0	\$836,400	\$0.51	1.1%
TOTAL									1.769		5.49%	3,716,810	\$76,267,416	\$46.50	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results		Stink Bug Composition	
State	NC	Total Bushels Harvested	63,960,000	Total		Species	% of SB
Year	2023	Total Bushels Lost to Insects	3,716,810	Foliar Insecticides Costs	\$27,948,880	Brown	40
Total Acres	1,640,000	Percent Yield Loss	5.49%	Seed Treatment Costs	\$2,952,000	Brown Marmorated	8
Yield/acre	39	Yield w/o Insects	41.27	Scouting costs	\$2,665,000	Green	31
Price/Bushel	\$13.00	Ave. # Spray Applications	1.769	Total Costs	\$33,565,880	Redbanded	0
% Acres Scouted	25	Seed Treated Acres	295,200	Yield Lost to insects	\$48,318,536	Redshouldered	0
Scouting Fee/scouted acre	\$6.50	Scouted Acres	410,000	Total Losses + Costs	\$81,884,416	Southern Green	21
% Acres Insect Seed Trt.	18					Total (make it 100%)	100
Seed Trt Cost/treated ac	\$10.00						

2023 SOYBEAN LOSSES

Appendix 14. Ohio soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/ acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	cost/acre	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss +
Amywom complex	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Cucumber Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	473,000	10.0%	0	0.0%	0	0.0%	0.00	\$15.00	0.10	0.000	\$0.00	0.01%	27,018	\$341,234	\$0.07	2.2%
Blister Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Com Earworm	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Dectes Stem Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Garden Webworms	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grape Colaspis	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshopper	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Green Cloverworm	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Japanese Beetle	236,500	5.0%	23,650	0.5%	236,500	5.0%	1.00	\$15.00	1.00	0.050	\$0.75	0.05%	135,089	\$5,253,670	\$1.11	34.0%
Kudzu Bug	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lesser Comstalk Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Mexican Bean Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Potato Leafhopper	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Seedcorn Maggot	236,500	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Slugs	236,500	5.0%	47,300	1.0%	47,300	1.0%	1.00	\$25.00	2.00	0.010	\$0.25	0.10%	270,177	\$4,594,840	\$0.97	29.8%
Soybean Aphid	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Gall Midge	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Looper	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spotted Cucumber Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (see box below)	236,500	5.0%	94,600	2.0%	236,500	5.0%	1.00	\$15.00	1.00	0.050	\$0.75	0.05%	135,089	\$5,253,670	\$1.11	34.0%
Thistle Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecornered Alfalfa Hopper	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Velvetbean Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Other	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	1,419,000	30.0%	1.00	\$0.00	0.00	0.300	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL										0.410	\$1.75	0.21%	567,372	\$15,443,414	\$3.26	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results		Stink Bug Composition	
State	OH	Total Bushels Harvested	269,610,000	Total	Per Acre	Species	% of SB
Year	2023	Total Bushels Lost to Insects	567,372	Foliar Insecticides Costs	\$8,277,500	Brown	20
Total Acres	4,730,000	Percent Yield Loss	0.21%	Seed Treatment Costs	\$30,272,000	Brown Marmorated	55
Yield/acre	57	Yield w/o Insects	57.12	Scouting costs	\$9,460,000	Green	25
Price/Bushel	\$12.63	Ave. # Spray Applications	0.410	Total Costs	\$48,009,500	Redbanded	0
% Acres Scouted	20	Seed Treated Acres	3,784,000	Yield Lost to insects	\$7,165,914	Redshouldered	0
Scouting Fee/scouted acre	\$10.00	Scouted Acres	946,000	Total Losses + Costs	\$55,175,414	Southern Green	0
% Acres Insect Seed Trt.	80					Total (make it 100%)	100
Seed Trt Cost/treated ac	\$8.00						

Appendix 15. South Carolina soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	cost/acre	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost
Amywom complex	395,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Cucumber Beetle	395,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	98,750	25.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Blister Beetle	59,250	15.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Corn Earworm	395,000	100.0%	59,250	15.0%	39,500	10.0%	1.00	\$20.00	1.00	0.100	\$2.00	1.00%	149,684	\$2,750,863	\$6.96	13.3%
Cutworms	395,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Defect Stem Borer	395,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Garden Webwoms	98,750	25.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grape Colaspis	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshopper	395,000	100.0%	79,000	20.0%	79,000	20.0%	1.00	\$12.00	0.25	0.200	\$2.40	0.25%	37,421	\$1,438,216	\$3.64	6.9%
Green Cloverworm	395,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Japanese Beetle	98,750	25.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Kudzu Bug	395,000	100.0%	98,750	25.0%	39,500	10.0%	1.00	\$12.00	0.25	0.100	\$1.20	0.25%	37,421	\$964,216	\$2.44	4.7%
Lesser Comstalk Borer	98,750	25.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Mexican Bean Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Potato Leafhopper	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	296,250	75.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Seedcorn Maggot	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Slugs	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Aphid	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Gall Midge	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Looper	395,000	100.0%	197,500	50.0%	197,500	50.0%	1.00	\$20.00	1.00	0.500	\$10.00	1.00%	149,684	\$5,910,863	\$14.96	28.5%
Spider Mites	395,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spotted Cucumber Beetle	395,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (see box below)	395,000	100.0%	355,500	90.0%	316,000	80.0%	1.00	\$12.00	2.00	0.800	\$9.60	2.00%	299,368	\$7,713,726	\$19.53	37.3%
Thistle Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecomered Alfalfa Hopper	395,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	395,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Velvetbean Caterpillar	395,000	100.0%	0	0.0%	79,000	20.0%	1.00	\$12.00	0.50	0.200	\$2.40	0.50%	74,842	\$1,928,432	\$4.88	9.3%
Other	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL									1.900		\$27.60	5.00%	748,421	\$20,706,316	\$52.42	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results		Stink Bug Composition	
State	SC	Total Bushels Harvested	14,220,000	Total	Per Acre	Species	% of SB
Year	2023	Total Bushels Lost to Insects	748,421	Foliar Insecticides Costs	\$10,902,000	Brown	10
Total Acres	395,000	Percent Yield Loss	5.00%	Seed Treatment Costs	\$2,567,500	Brown Marmorated	1
Yield/acre	36	Yield w/o Insects	37.89	Scouting costs	\$888,750	Green	10
Price/Bushel	\$13.10	Ave. # Spray Applications	1.900	Total Costs	\$14,358,250	Redbanded	3
% Acres Scouted	25	Seed Treated Acres	197,500	Yield Lost to insects	\$9,804,316	Redshouldered	1
Scouting Fee/scouted acre	\$9.00	Scouted Acres	98,750	Total Losses + Costs	\$24,162,566	Southern Green	75
% Acres Insect Seed Trt.	50					Total (make it 100%)	100
Seed Trt Cost/treated ac	\$13.00						

2023 SOYBEAN LOSSES

Appendix 16. Tennessee soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/ acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	cost/acre	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost
Amywom complex	80,000	5.0%	16,000	1.0%	1,600	0.1%	1.00	\$11.50	0.80	0.001	\$0.01	0.04%	32,156	\$452,504	\$0.28	1.2%
Banded Cucumber Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	1,600,000	100.0%	160,000	10.0%	64,000	4.0%	1.00	\$8.25	0.30	0.040	\$0.33	0.30%	241,169	\$3,783,781	\$2.36	10.2%
Blister Beetle	32,000	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Corn Earworm	400,000	25.0%	112,000	7.0%	80,000	5.0%	1.00	\$12.00	1.00	0.050	\$0.60	0.25%	200,974	\$3,673,150	\$2.30	9.9%
Cutworms	32,000	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Defectes Stem Borer	1,440,000	90.0%	0	0.0%	1,600	0.1%	1.00	\$8.25	0.20	0.001	\$0.01	0.18%	144,701	\$1,966,668	\$1.23	5.3%
Garden Webworms	3,200	0.2%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grape Colaspis	320,000	20.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshopper	160,000	10.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Green Cloverworm	1,440,000	90.0%	128,000	8.0%	112,000	7.0%	1.00	\$8.25	0.40	0.070	\$0.58	0.36%	289,403	\$4,830,937	\$3.02	13.1%
Japanese Beetle	1,200,000	75.0%	1,600	0.1%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Kudzu Bug	1,280,000	80.0%	112,000	7.0%	160,000	10.0%	1.00	\$8.25	0.50	0.100	\$0.83	0.40%	321,559	\$5,661,041	\$3.54	15.3%
Lesser Comstalk Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Mexican Bean Beetle	16,000	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Potato Leafhopper	16,000	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	112,000	7.0%	0	0.0%	0	0.0%	1.00	\$10.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Seedcorn Maggot	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Slugs	400,000	25.0%	64,000	4.0%	0	0.0%	1.00	\$14.00	0.50	0.000	\$0.00	0.13%	100,487	\$1,356,575	\$0.85	3.7%
Soybean Aphid	8,000	0.5%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Gall Midge	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Looper	640,000	40.0%	32,000	2.0%	32,000	2.0%	1.00	\$13.00	0.05	0.020	\$0.26	0.02%	16,078	\$633,052	\$0.40	1.7%
Spider Mites	160,000	10.0%	16,000	1.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spotted Cucumber Beetle	1,600,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Slink Bugs (see box below)	1,600,000	100.0%	320,000	20.0%	400,000	25.0%	1.00	\$8.25	0.60	0.250	\$2.06	0.60%	482,338	\$9,811,561	\$6.13	26.6%
Thistle Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecornered Alfalfa Hopper	1,600,000	100.0%	64,000	4.0%	32,000	2.0%	1.00	\$8.25	0.20	0.020	\$0.17	0.20%	160,779	\$2,434,520	\$1.52	6.6%
Thrips	1,600,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Velvetbean Caterpillar	48,000	3.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Other	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	480,000	30.0%	1.50	\$3.25	0.00	0.450	\$1.46	0.00%	0	\$2,340,000	\$1.46	6.3%
TOTAL										1.002	\$6.30	2.48%	1,989,644	\$36,943,790	\$23.09	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results		Slink Bug Composition		
State	TN	Total Bushels Harvested	78,400,000	Foliar Insecticides Costs	Total \$10,083,600	Per Acre \$6.30	Species	% of SB
Year	2023	Total Bushels Lost to insects	1,989,644	Seed Treatment Costs	\$8,960,000	\$5.60	Brown	15
Total Acres	1,600,000	Percent Yield Loss	2.48%	Scouting costs	\$5,400,000	\$3.38	Brown Marmorated	24
Yield/acre	49	Yield w/o Insects	50.24	Ave. # Spray Applications	1.002		Green	50
Price/Bushel	\$13.50	Seed Treated Acres	1,120,000	Total Costs	\$24,443,600	\$15.28	Redbanded	1
% Acres Scouted	45	Scouted Acres	720,000	Yield Lost to insects	\$26,860,190	\$16.79	Redshouldered	0
Scouting Fee/scouted acre	\$7.50			Total Losses + Costs	\$51,303,790	\$32.06	Southern Green	10
% Acres Insect Seed Trt.	70						Total (make it 100%)	100
Seed Trt Cost/treated ac	\$8.00							

Appendix 17. Texas soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/ acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost	
Amywom complex	21,250	25.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Cucumber Beetle	85,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Blister Beetle	21,250	25.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Com Earworm	21,250	25.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Dectes Stem Borer	4,250	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Garden Webworms	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grape Colaspis	17,000	20.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshopper	85,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Green Cloverworm	8,500	10.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Japanese Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Kudzu Bug	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lesser Comstalk Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Mexican Bean Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Potato Leafhopper	68,000	80.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	8,500	10.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Seedcorn Maggot	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Slugs	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Aphid	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Gall Midge	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Looper	8,500	10.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	4,250	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spotted Cucumber Beetle	85,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (see box below)	85,000	100.0%	63,750	75.0%	59,500	70.0%	1.00	\$15.50	5.00	0.700	\$10.85	5.00%	111,842	\$2,376,197	\$27.96	100.0%
Thistle Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecornered Alfalfa Hopper	85,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	85,000	100.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Velvetbean Caterpillar	4,250	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Other	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL							0.700	\$10.85	5.00%	0.700	\$10.85	5.00%	111,842	\$2,376,197	\$27.96	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results			Stink Bug Composition	
State	TX	Total Bushels Harvested	2,125,000	Foliar Insecticides Costs	Total \$922,250	Per Acre \$10.85	Species	% of SB
Year	2023	Total Bushels Lost to Insects	111,842	Seed Treatment Costs	\$935,000	\$11.00	Brown	25
Total Acres	85,000	Percent Yield Loss	5.00%	Scouting costs	\$212,500	\$2.50	Brown Marmorated	0
Yield/acre	25	Yield w/o Insects	26.32	Total Costs	\$2,069,750	\$24.35	Green	5
Price/Bushel	\$13.00	Ave. # Spray Applications	0.700	Yield Lost to insects	\$1,453,947	\$17.11	Redbanded	55
% Acres Scouted	25	Seed Treated Acres	85,000	Total Losses + Costs	\$3,523,697	\$41.46	Redshouldered	5
Scouting Fee/scouted acre	\$10.00	Scouted Acres	21,250				Southern Green	10
% Acres Insect Seed Trt.	100						Total (make it 100%)	100
Seed Trt Cost/treated ac	\$11.00							

2023 SOYBEAN LOSSES

Appendix 18. Virginia soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/ acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	cost/acre	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost
Amywom complex	114,000	20.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Cucumber Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	171,000	30.0%	1,140	0.2%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Blister Beetle	57,000	10.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Com Earworm	285,000	50.0%	85,500	15.0%	171,000	30.0%	1.00	\$13.00	3.00	0.300	\$3.90	1.50%	349,199	\$6,867,345	\$12.05	31.0%
Cutworms	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Decies Stem Borer	28,500	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Garden Webworms	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grape Colaspis	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshopper	114,000	20.0%	28,500	5.0%	28,500	5.0%	1.00	\$13.00	0.00	0.050	\$0.65	0.00%	0	\$370,500	\$0.65	1.7%
Green Cloverworm	285,000	50.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Japanese Beetle	114,000	20.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Kudzu Bug	28,500	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lesser Comstalk Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Mexican Bean Beetle	5,700	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Potato Leafhopper	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	5,700	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Seedcorn Maggot	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Slugs	114,000	20.0%	28,500	5.0%	17,100	3.0%	1.00	\$20.00	2.00	0.030	\$0.60	0.40%	93,120	\$1,580,492	\$2.77	7.1%
Soybean Aphid	5,700	1.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Gall Midge	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Looper	285,000	50.0%	42,750	7.5%	28,500	5.0%	1.00	\$18.00	2.00	0.050	\$0.90	1.00%	232,799	\$3,609,230	\$6.33	16.3%
Spider Mites	28,500	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spotted Cucumber Beetle	142,500	25.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Stink Bugs (see box below)	513,000	90.0%	114,000	20.0%	228,000	40.0%	1.00	\$13.00	1.50	0.400	\$5.20	1.35%	314,279	\$7,143,910	\$12.53	32.2%
Thistle Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecornered Alfalfa Hopper	370,500	65.0%	28,500	5.0%	28,500	5.0%	1.00	\$13.00	0.40	0.050	\$0.65	0.26%	60,528	\$1,175,520	\$2.06	5.3%
Thrips	427,500	75.0%	8,550	1.5%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Velvetbean Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Other	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	285,000	50.0%	1.00	\$5.00	0.00	0.500	\$2.50	0.00%	0	\$1,425,000	\$2.50	6.4%
TOTAL										1.380	\$14.40	4.51%	1,049,925	\$22,171,997	\$38.90	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results		Stink Bug Composition		
State	VA	Total Bushels Harvested	22,230,000	Foliar Insecticides Costs	Total \$8,208,000	Per Acre \$14.40	Species	% of SB
Year	2023	Total Bushels Lost to Insects	1,049,925	Seed Treatment Costs	\$1,710,000	\$3.00	Brown	36
Total Acres	570,000	Percent Yield Loss	4.51%	Scouting costs	\$2,052,000	\$3.60	Brown Marmorated	14
Yield/acre	39	Yield w/o Insects	40.84	Total Costs	\$11,970,000	\$21.00	Green	46
Price/Bushel	\$13.30	Ave. # Spray Applications	1.380	Yield Lost to insects	\$13,963,997	\$24.50	Redbanded	0
% Acres Scouted	30	Seed Treated Acres	142,500	Total Losses + Costs	\$25,933,997	\$45.50	Redshouldered	1
Scouting Fee/scouted acre	\$12.00	Scouted Acres	171,000				Southern Green	3
% Acres Insect Seed Trt.	25						Total (make it 100%)	100
Seed Trt Cost/treated ac	\$12.00							

Appendix 19. Wisconsin soybean insect losses, 2023.

Pest	Acres Infested	% Acres Infested	Acres above ET	% Acres above ET	Acres Treated	% Acres Treated	# of apps/acres treated	Cost of 1 Insecticide	% loss per acre infested	# of apps per total soy acres	Overall % reduction	bushel lost per pest	Loss + Cost	Loss + Cost/acre	% Total Loss + Cost	
Amyworm complex	633,000	30.0%	527,500	25.0%	422,000	20.0%	1.00	\$10.00	3.00	0.200	\$2.00	0.90%	996,389	\$16,973,778	\$8.04	35.1%
Banded Cucumber Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Bean Leaf Beetle	105,500	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Blister Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Com Earworm	422,000	20.0%	105,500	5.0%	105,500	5.0%	1.00	\$10.00	2.00	0.050	\$0.50	0.40%	442,840	\$6,723,346	\$3.19	13.9%
Cutworms	316,500	15.0%	42,200	2.0%	0	0.0%	0.00	\$0.00	1.00	0.000	\$0.00	0.15%	166,065	\$2,125,630	\$1.01	4.4%
Diates Stem Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Garden Webworms	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grape Colaspis	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Grasshopper	844,000	40.0%	211,000	10.0%	168,800	8.0%	1.00	\$10.00	2.00	0.080	\$0.80	0.80%	885,679	\$13,024,691	\$6.17	26.9%
Green Cloverworm	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Japanese Beetle	1,477,000	70.0%	84,400	4.0%	0	0.0%	0.00	\$0.00	0.50	0.000	\$0.00	0.35%	387,485	\$4,959,802	\$2.35	10.3%
Kudzu Bug	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lesser Comstalk Borer	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Mexican Bean Beetle	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Potato Leafhopper	316,500	15.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Seedcorn Maggot	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Slugs	105,500	5.0%	63,300	3.0%	42,200	2.0%	1.00	\$40.00	2.00	0.020	\$0.80	0.10%	110,710	\$3,105,086	\$1.47	6.4%
Soybean Aphid	42,200	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Gall Midge	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Soybean Looper	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	63,300	3.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spotted Cucumber Beetle	422,000	20.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.50	0.000	\$0.00	0.10%	110,710	\$1,417,086	\$0.67	2.9%
Stink Bugs (see box below)	42,200	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thistle Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Threecomered Alfalfa Hopper	42,200	2.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Thrips	105,500	5.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Velvetbean Caterpillar	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Other	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Automatic (no insects)	0	0.0%	0	0.0%	0	0.0%	0.00	\$0.00	0.00	0.000	\$0.00	0.00%	0	\$0	\$0.00	0.0%
TOTAL									0.350		\$4.10	2.80%	3,099,877	\$48,329,420	\$22.90	100.0%

SUMMARY DATA

Data Input		Yield & Management Results		Economic Results		Stink Bug Composition		
State	WI	Total Bushels Harvested	107,610,000	Foliar Insecticides Costs	Total \$8,651,000	Per Acre \$4.10	Species	% of SB
Year	2023	Total Bushels Lost to Insects	3,099,877	Seed Treatment Costs	\$5,084,000	\$2.40	Brown	50
Total Acres	2,110,000	Percent Yield Loss	2.80%	Scouting costs	\$5,275,000	\$2.50	Brown Marmorated	10
Yield/acre	51	Yield w/o Insects	52.47	Total Costs	\$18,990,000	\$9.00	Green	40
Price/Bushel	\$12.80	Ave. # Spray Applications	0.350	Yield Lost to insects	\$39,678,420	\$18.80	Redbanded	0
% Acres Scouted	50	Seed Treated Acres	844,000	Total Losses + Costs	\$58,668,420	\$27.80	Redshouldered	0
Scouting Fee/scouted acre	\$5.00	Scouted Acres	1,055,000				Southern Green	0
% Acres Insect Seed Trt.	40						Total (make it 100%)	100