Georgia Entomological Society Arthropod Survey

2024

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Apple

Apple insect and mite IPM in GA remains reasonably stable. In most GA apple orchards insecticide applications timed by temperature-driven developmental models continue provide excellent control of codling moth (*Cydia pomonella*) and Oriental fruit moth (*Grapholita molesta*), our key fruit feeding lepidopterans. Additionally, orchards experiencing declining insecticide performance continue to get good to excellent codling moth and Oriental fruit moth control with pheromone-based mating disruption.

Brown marmorated stink bug (*Halyomorpha halys*) is readily observed in GA's mountain counties. Population numbers have tapered off over the past couple of years but are still commonly found in landscapes surrounding orchards. Fortunately, to date there continues to only be marginal issues due to BMSB in North GA apple and peach production.

Wooly apple aphid (*Eriosoma lanigerum*) is generally well managed throughout the apple industry. Beneficial insect monitoring has revealed that predaceous hoverfly species are commonly found in GA apple orchards throughout the season. In addition, with lacewing larvae and the aphid parasitoid, *Aphelinus mali* (Haldeman), most orchards did not need to be treated for aphids in 2024.

A complex of ambrosia beetles (subfamily Scolytinae) has been associated with rapid apple decline, and has been observed in surrounding states, such as North Carolina. These small beetles excavate tunnels in stressed trees and inoculate the bored-out galleries with a fungus. The resulting injury, fungal infection, and secondary infections can rapidly kill trees. We have continued to monitor ambrosia beetles and tree injury since 2020 to better understand the incidence of this pest. Several species of ambrosia beetles and bark beetles have been recorded, with the black stem borer (*Xylosandrus germanus*) the most abundant species. Nevertheless, there were no reports of major ambrosia beetle attacks or tree losses of trees due to rapid apple decline in North GA during 2024.

Blueberry

Spotted-wing drosophila (SWD) remains the key pest of blueberries in Georgia. SWD populations were lower during the 2024 field season. Most of the growers followed management programs developed by the UGA Blueberry Entomology program and didn't experience major issues related to SWD infestation in their fruit. To improve biological control of SWD, after 10 years of sustained efforts, the national SWD SCRI project team members were able to get permits to release the exotic parasitoid, *Ganaspis kimorum*. We have started field releases of the exotic parasitoid, *G. kimorum* in GA and will continue to release more parasitoids as they become available with the long-term goal of getting them established in blueberry production systems in Georgia. Overall, SWD management costs ranged from $100-150 per acre.

Secondary pest problems were on the rise. During 2024, gall midge and flower thrips populations were reported by several growers. Other pests reported during~~in~~ the 2024 field season included chilli thrips, scales, mealybugs, and bud mites. Whiteflies were also reported and seem to occur at more farms and at higher population densities than ever before. Even

though we confirmed chilli thrips presence in several blueberry producing counties in 2023, economically important populations of chilli thrips were reported for the very first time in 2024. Over the past couple of years, the chilli thrips have caused serious problems in Florida blueberries where farmers had to spray 9-12 times to control them. While the economic impact of chilli thrips in Georgia blueberries remains to be determined, we plan to continue ~~to~~ monitoring chilli thrips populations in collaboration~~s~~ with UGA County Extension Agents and update blueberry growers on the distribution and economic impact of chilli thrips in Georgia. Other insect pests reported during 2024 included cherry fruit-worm, cranberry fruit-worm, leafhoppers, ~~whiteflies,~~ flat headed borers, blueberry leaf beetles, and slugs. Statewide, a significant proportion of the blueberry acreage was treated with 1-4 insecticide applications to control these secondary insect pests.

Corn

Corn acreage in Georgia was 410,000 acres planted, and 375,000 acres harvested which was about 15% less than in the previous year. Growing conditions generally were cool and wet to start but hot and dry in June during pollination which reduced grain yields. Average grain yield was 163 bushel/acre, which was about 9 bushel/acre less than the year before, but many irrigated fields yielded 250 or more bushel/acre. The average corn grain price received was $4.50 per bushel which was 22% lower than in 2023. An additional 30,000 acres were harvested as silage with a yield of 20 tons per acre. All corn seed is treated with a neonicotinoid insecticide (mostly clothianidin or thiamethoxam), so soil insect damage was minimal. Stink bugs are the most important foliar pest of corn. Stink bug infestations were moderate to high in most areas, but preventive sprays of pyrethroid insecticides were still widely used. Fall armyworm had an outbreak in 2024 later in the season, but infestations were low in on-time planted corn in 2024. All commercially available Bt corn products are still effective in preventing fall armyworm whorl infestations. Bt products also continue to provide good control of stalk borers. Corn earworm infestations were low to moderate in on-time planted corn but increased to damaging levels in late-planted corn. Bt corn adoption is about 90% in the state. Cost of Bt technology was about $16 to $28 per acre depending on trait package. Significantly more ear/kernel damage by corn earworm was observed in Bt corn with older products with Cry type Bt toxins than 10 years earlier suggesting that field-evolved resistance is occurring to Cry Bt toxins in Georgia. Studies in 2024 indicate resistance in corn earworm populations to the Cry1A and Cry1A.105 genes are now widespread in the southern U.S. The Vip3Aa Bt trait in pyramided Bt products was still highly effective against corn earworm.

Cotton

2024 was a challenging year for Georgia cotton producers due to extreme weather events, low commodity prices, and high input costs. Tropical storm Debby moved across southeastern Georgia bringing heavy rains in early August. Hurricane Helene moved through east Georgia in late September and had a devastating effect on many acres. Data suggest over a 30 percent yield loss associated with this hurricane. Cotton was harvested on 1.09 million acres with an average yield of 850 lbs. lint per acre. Average insecticide applications were 2.9 per acre, average yield loss due to insects was 3.9 percent, and the total costs associated with insect pests (losses plus control costs) was $117.18 per acre.

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Thrips infestations were unusually low during 2024. Nearly all acres received a preventive at-plant insecticide and approximately 15 percent of the acres received a supplemental foliar application. Yield loss from thrips was minimal.

Tarnished plant bugs infested 85 percent of Georgia cotton and 41 percent of the acres were treated for this pest. We continue to see a disturbing trend for increased numbers of tarnished plant bugs in cotton. Number of applications per treated acre was 1.9 which is a result of multiple applications needed on some fields, especially in southwest Georgia. This is the highest percentage of Georgia cotton acres treated for tarnished plant bugs in modern history, and cost of control and yield loss attributed to tarnished plant bugs exceeded $32 million. Bifenthrin and other pyrethroid insecticides, commonly used for stink bug control after bloom, were not providing acceptable control of tarnished plant bugs. Preliminary data suggested pyrethroid resistance (resistance ratio of 77X) in a population from Tift County. We observed reproducing plant bug populations late in the season over many acres and resistance is likely contributing to this observation. Clouded plant bugs infested 25 percent of the acres and were treated on about 7.5 percent of the acres. Spider mites infested 70 percent of acres and 12 percent of acres were treated. Increased infestations and treatment of spider mites are likely associated with increased plant bug sprays which disrupt natural controls. Although cotton aphid infests most acres each year, this sucking pest rarely causes economic loss. Nevertheless, growers treated 12 percent of acres for cotton aphid.

Over 99 percent of cotton planted in Georgia is Bt cotton. The industry continues to transition to 3-gene Bt cottons which were planted on over 90 percent of the acres. This transition needs to continue since laboratory bioassays suggests high levels of resistance to Cry1Ac (the first Bt trait introduced in 1996) and decreased susceptibility to the second trait Cry2Ab. The third Bt trait, Vip3A continues to be very active on CEW. Despite these concerns, only 2 percent of the 2-gene Bt cotton acreage was treated for corn earworm. Stink bugs continue to be the most common insect requiring treatment. Approximately 85 percent of acres were treated for stink bugs. Cost of control and yield loss attributed to stink bugs exceeded $34 million which was lower than previous years due in part because stink bug control was achieved with late season plant bug insecticide applications. Although whiteflies infested 50 percent of the acres, only 10 percent were treated, primarily in areas where both cotton and vegetables are produced.

Forest

Numerous native forest insects are typically problematic in Georgia forests, however southern pine beetle (*Dendroctonus frontalis*) was particularly troubling in 2024. Georgia Forestry Commission (GFC) pine beetle aerial surveys observed 20,381,481 acres in 2024. Statewide, SPB infestations were higher than in recent decades with 1,671 active SPB infestations and 3,827 acres infested in 2024. Additionally, 82 Ips engraver beetle (*Ips calligraphus, I. grandicollis, I. avulsus*) and 5 black turpentine beetle (*Dendroctonus terebrans*) infestations were documented.

Hurricane Helene caused $1.28 billion in timber losses, with additional post-hurricane timber losses due to bark beetle and wood borer activity on damaged standing trees expected over the next three years. Infestations by black turpentine beetle (*Dendroctonus terebrans*), Ips engraver

beetle (*Ips calligraphus, I. grandicollis, I. avulsus*), and pine sawyers (*Monochamus* spp.) are typical on damaged trees after storms.

Invasive insects are a concern for Georgia's forests. Spotted lanternfly (*Lycorma delicatula*) was documented in Georgia in the fall of 2024 in the Atlanta area. Georgia Forestry Commission will establish monitoring plots in forested areas near the documented SLF population. Additionally, GFC monitors for Asian longhorned beetle (*Anoplophora glabripennis*), which has not been detected in GA yet, and spongy moth (*Lymantria spp*).

Livestock, Poultry, and Pets

Among Georgia's Top 10 agricultural commodities, three are animal agriculture – broilers (#1), egg-laying hens (#3), and beef cattle (#6). Combined, the farm gate value of these three commodities totals over half the state's entire agricultural farm gate income, illustrating the significance of animal agriculture in the state.

Beef Cattle

Beef ranks 6th in the top ten Georgia commodities, and Georgia ranks 20th nationally in cattle production, with over a half million cows on pasture annually, amounting to a farm gate value of over $663 million. Horn flies (*Haematobia irritans*) are the main pest of pastured cattle, causing cattle irritation and aggravation by their blood-feeding habit. More significantly, the cow's avoidance behaviors disrupt calf nursing, meaning calf weaning weights may be reduced by 18 pounds per calf compared with calves on mother cows with good horn fly control. Due to recent mild winters, cattlemen in South Georgia have had horn flies on their animals continuously, with some treating for flies as early as February. Statewide, annual losses to horn flies on Georgia cow-calf operations were over $15.4 million. Horn fly suppression is dependent on insecticides, although widespread insecticide resistance means there are few options that effectively reduce horn fly numbers for more than a few days. Stable flies, another bloodsucking fly attacking cattle, account for over $15 million in losses for Georgia cattle herds. To control horn flies and stable flies (as well as other ectoparasites such as face flies, lice, etc.), Georgia cattlemen invest ca. $6.1 million annually.

The Asian Longhorned Tick (*Haemaphysalis longicornis*) was first reported in Georgia in September 2021, on a cow-calf operation in Pickens County and has been found in four Georgia counties (Hall, Habersham, and White added to Pickens). Because it transmits the causative agent of theileriosis in cattle (with 5% of infected animals dying, and currently no preventative and no treatment), this new invasive may significantly impact how pest suppression is practiced on Georgia livestock.

Broilers

Georgia continues to be the nation's number 1 broiler producing state. Broilers rank at the top of Georgia's agricultural commodities, accounting for farm gate value of $5.8 billion annually, or 33.02% of the state's farm gate value.

Worldwide, darkling beetles (*Alphitobius diaperinus*), whose larvae are known as lesser mealworms, are the primary pest of broiler production. These insects burrow into the insulation to pupate, damaging facilities and lowering insulative capacity. Costs of heating

during winter and cooling houses in summer significantly increase production costs, and chickens eat more in cold weather to maintain body heat. When litter is removed and applied to pastures or fields as a soil amendment, beetles are distributed and may migrate to nearby homes, creating neighborhood friction. Lesser mealworms feed on dead birds and feces, thereby acquiring numerous pathogens which they can transfer to uninfected birds when consumed. They also maintain Salmonella in their guts during pupation, so newly emerged adult beetles are infectious to chickens. Chickens are predators and prone to eating insects; filling their digestive tracts with indigestible beetles prevents them from consuming nutritious feed and gaining weight, as meat birds are intended to do. *Alphitobius* populations worldwide have been shown to be resistant to most of the pesticides registered for their suppression, so management strategies are minimal. Suppression efforts have some effect on beetle numbers, but there are no tactics that significantly reduce beetle populations.

All 12,000 Georgia broiler houses are infested with darkling beetles, and broiler producers spend approximately $13.2 million annually for *Alphitobius* suppression. Statewide losses to the beetles are estimated at $4.9 million annually. The resulting total, ca. $18.1 million annually, underestimates the impact of this pest in the state. Again, even the most conscientious and strategic intervention is ineffective at suppressing *Alphitobius* beetles with current products and technology.

Caged Layers

Table eggs are Georgia's third most lucrative commodity, with an annual value to the state of over $960 million (ranking Georgia 6th nationally). The principal pest in caged layer houses is the house fly (*Musca domestica*), which causes spotting of eggs, degradation of equipment through fecal contamination, and neighborhood aggravation when flies migrate away from the poultry farm to nearby residences. Because of suitable conditions inside layer houses, house flies can be a year-round problem. Producers use manure and water management, trapping, biological control (fly parasitoids and predators), and various pesticides to suppress house flies around caged layer operations. Worldwide, house flies have been shown resistant to most insecticides, so control is seldom adequate. Losses due to flies combined with costs of management are estimated to total over $8.1 million annually.

Bed bugs have recently become a major threat in poultry houses, primarily through transferal from human dwellings. All the challenges that accompany bed bug control in urban entomology (paucity of available suppression options, insecticide resistance, lack of information on basic pest ecology and ethology, etc.) impact their pest status in poultry, as well. Confined birds make excellent bed bug hosts, and workers take the bugs home with them to infest their homes and bring bed bugs with them to the workplace. With this infinite source, getting a handle on bed bugs in poultry is virtually impossible. There are no effective insecticides registered for use while birds are in the house; bed bugs typically secrete themselves in inaccessible crevices once birds are removed, so are not contacted by insecticide applications during down times; and residuals rarely persist long enough to affect bed bugs once the house is repopulated. No economic loss estimates have yet been attempted. Northern fowl mites (*Ornithonyssus sylviarum*) are the second most significant pest in layer flocks. These mites are bloodsuckers

that spend their entire life cycle on the chicken host, causing itching, scabbing, anemia, and general bird discomfort and lack of thriftiness. Workers bothered by mites moving to them, biting and crawling, can be so alarmed that they refuse to work in such conditions. Losses due to reduced feed conversion efficiency and reduced egg production are estimated at $1.9 million annually, while suppression costs (primarily acaricides) are about $1.8 million per year, totaling $3.7 million statewide annually.

Dairy

Georgia's 112 dairy farms currently house over 81,000 dairy cows. Dairy cattle are affected by the same pests that plague beef herds, and stress from ectoparasites can compromise cow health and milk production. Stable flies are more severe on dairy animals, both because there is more larval habitat (spilled feed, decaying hay, etc.) on dairy properties than on pasture and because milk cows are more severely impacted by stable fly feeding than are beef animals. Milk cows are more susceptible to mastitis (caused by Staphylococcus associated with horn flies and stable flies). Stable fly feeding interrupts cow feeding; host avoidance behaviors raise animal temperatures and waste energy. House fly emigration from dairies creates neighborhood ill will, so house fly suppression becomes a priority, even though this species has minimal direct impact on the animals. While dairy losses are difficult to assess, combined lost production and costs of control are estimated at about $500,000 per year.

Pets

Approximately 2.7 million Georgia households have dogs and/or cats. The three major arthropod pests affecting pets are fleas, ticks, and mosquitoes. Because fleas transmit tapeworms, ticks transmit pathogens such as *Ehrlichia*, and mosquitoes carry heartworm, pest suppression is essential for disease prevention and to maintain pet health. Recent advances in ectoparasite control have yielded flea and tick control products with enhanced efficacy and concomitant premium prices. In Georgia, expenditures for ectoparasite control on dogs and cats amount to over $135 million annually. Treatment for mosquito-vectored dog heartworm costs pet-owners over $1.6 million annually, not including treatment for patent infections and ancillary sequelae. The Asian Longhorned Tick will also infest dogs, cats, horses, and other companion animals, greatly affecting how ectoparasites are suppressed.

Future

Arthropods have been demonstrated capable of transmitting Asian Influenza Virus, and the recent discovery of Highly-Pathogenic Avian Influenza (HPAI) infecting dairy cattle in Texas, Kansas, and New Mexico has heightened alarm about inter-species transfer of HPAI. These concerns likely will lead to more intensive efforts to suppress flies and other potential vectors in animal agriculture. Cattle fever ticks have crossed the Mexico border and are again threatening to spread through Texas, with risk of spilling over into the Southeast and invading Georgia, a pest not seen here in almost a hundred years. The screwworm fly, eradicated from the U.S. in the 1980s, is no longer being successfully confined to South America, but has resurged through Panama and most of Central America and is even recolonizing Mexico. With the USDA at risk, neither funding nor adequate political will may be found to prevent screwworms from reinvading the United States.

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Peach

Peach production across GA was up significantly 2024 due to the large crop loss from climatic issues in 2023. However, pest pressure from fruit-attacking insect pests, such as Oriental fruit moth (*Grapholita molesta*), assorted stink bugs, and green June beetles in peach orchards across GA was light to moderate in 2024. Conversely, there was high pressure from plum curculio (*Conotrachelus nenuphar*) during the 2024 season. In orchards that were unsprayed, we saw upwards of 45% infestation by plum curculio. Nevertheless, most of the acreage was heavily managed with pyrethroids and phosmet, which kept injury below levels of economic loss.

Premature tree decline associated lesser peachtree borer (*Synanthedon pictipes*) and peachtree borer (*Synanthedon exitiosa*) continued to cause serious losses in 2024. Lesser peachtree borer management has been reliable with dilute, pre-bloom chlorpyrifos sprays, complimented by in-season cover sprays and a post-harvest application of chlorpyrifos. Successful management of borers was put in jeopardy as the EPA banned the tolerances of chlorpyrifos on all food crops in March of 2022. However, the 8th U.S. Circuit Court of Appeals overturned the EPA's decision on November 2, 2023, with the EPA finalizing the court's reinstatement of chlorpyrifos tolerances allowing use of currently labeled products on February 2, 2024. As such, products, except those already subject to cancellations, are currently legal to use following the label. Chlorpyrifos continues to be the main management strategy for borers for many of GA peach growers. However, with the future of chlorpyrifos registration uncertain, it is expected that growers will switch to alternative management strategies like mating disruption in future seasons. In 2024, approximately 1,000 acres of peaches were under disruption using the Southeastern-formulated mating disruption pheromone, Isomate-LPTB Plus, for management of both peachtree borer and lesser peachtree borer.

Scale insects, particularly San Jose scale (*Comstockaspis perniciosus*), have become a perennial problem for peach production in middle Georgia; however, in 2022, 2023, and again in 2024, populations were considerably reduced compared to previous years. Growers that applied two dormant oil applications at higher volumes, 150-175 gal/acre, and included an insect growth regulator, such as pyriproxyfen, and within season applications of bifenthrin, have experienced admirable control of scale. Very few crawlers were collected via monitoring traps, and no fruit were observed to be damaged in 2024. Nevertheless, with the mild winter of the 2024-2025 season, the low San Jose scale population has the potential to thrive, so if the low numbers go unchecked, by the end of the season we may have another bad scale year.

In recent years, including 2024, the white peach scale (*Pseudaulacaspis pentagona*) has been detected more commonly across middle Georgia, where previously it has been generally considered uncommon. As it is easier to see with its bright white waxy layer, white peach scale is often easier to spot treat to effectively manage it.

The invasive brown marmorated stink bug (*Halyomorpha halys*) continues to be observed in substantial numbers in the Fort Valley area, the key peach growing region of GA. Population numbers continue to be highest post-harvest, and there have been no reported crop loss/injury due to this pest.

Growers have been concerned that their trees are being negatively impacted by viruses. A survey conducted by Clemson University across Georgia and South Carolina peach production, revealed that many of the sites across the two states were infected with prunus necrotic ringspot virus and the peach latent mosaic viroid. Interestingly, both prunus necrotic ringspot virus and the peach latent mosaic viroid can be spread through pollen, and these viruses will be monitored across the southeast in the coming years.

Peanut

Georgia farmers planted peanut on 850,000 acres in 2024, and the statewide average yield was 3800 pounds of farmer stock per acre according to the USDA's National Agricultural Statistics Service. Planting began on-time in 2024 but was delayed by rainfall and prolonged wet soil conditions in May. Georgia-06G was the most commonly planted cultivar, but new cultivars with improved resistance to TSWV are beginning to gain market share. Early-season thrips pressure was light in most locations, and TSWV incidence at the end of the year as determined by UGA ANR agent assessment of 357 fields across the state averaged 7.4%. This was the second lowest average incidence of TSWV in peanut since the county agent survey began in 2020. Phorate continued to be used in-furrow at plant on the majority of peanut acres for thrips and TSWV management.

Despite the high rainfall in May, lesser cornstalk borer (LCB) infestations exceeded the economic threshold in many locations in June. An end-of-season grower survey indicated that 28% of surveyed acres were treated with an insecticide to manage LCB. Chlorantraniliprole was the most commonly used active ingredient for LCB followed by novaluron.

The big story in 2024 was the abundance of foliage feeding caterpillars, and particularly the higher-than-normal beet armyworm pressure. Growers reported treating 87% of peanut acres with at least one insecticide to manage foliage feeding caterpillars. Diflubenzuron was applied to over 50% of surveyed acres in 2024; chlorantraniliprole and methoxyfenozide were the next most applied active ingredients. Beet armyworm control failures were reported in multiple locations in Georgia following applications of chlorantraniliprole, and subsequent investigation confirmed resistance to the active ingredient in the test populations.

Due to judicial action, food use tolerances for chlorpyrifos were reinstated in 2024, and (limited) product was available for use by peanut growers to manage rootworm and burrower bug infestations. Rootworm continues to be a consistent and significant economic pest of peanut in areas with a history of infestations. The relatively recent increase in rootworm losses in areas where the pest has not historically been a problem is being attributed mostly to the non-native banded cucumber beetle.

Two spotted spider mite was found in many fields late in the 2024 growing season, but application of miticides was limited. Currently there are only two effective miticides registered for use in peanut, and the lack of options presents a challenge for Georgia producers.

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Pecan

Insect pest pressure in Georgia's pecan crop was somewhat localized and above average for a few species. Infestation of pecan phylloxera was widely observed and certainly higher than in any typical year. Growers typically made one application during the pre-pollination spray targeted for scab. The pressure of pecan nut case bearer was significantly higher in 2024 compared to the previous year. The pecan entomology program collaborated with county agents to monitor and determine bio-fix for this insect, documenting the flight activities and population level in 10 different counties.

Yellow and black pecan aphid pressure was average. However, there were a few locations where black pecan aphids bounced back even after 1-2 applications of aphid materials. Information shared by the UGA Pecan Extension Specialist and field visits brought to our attention that there could be a low level of insecticide tolerance among black pecan aphid populations. The most effective and commonly used chemistry to control black pecan aphids, Transform®, has shown a reduction in efficacy in a few orchards. Similar observations were made in the case of Carbine®, which is another aphicide used by growers. In less managed orchards with older trees, nut curculio infestation was high, resulting in a nut drop in several orchards. However, there was no report of pecan weevil populations in the southern production region of the state.

Pecan leaf scorch mite was occasionally reported, but the population pressure was not high enough to trigger miticide applications in most areas. Hickory shuckworm, a late-season pest, was found in most orchards. However, there was no monitoring effort for the pest or means to measure its economic impact. Growers have been relying on the standard practice of adding insecticides such as Intrepid® along with the fungicide spray timed during the month of August. There has been some elevated concern for stink bugs and leaf-footed bug damage in pecan from several areas of the state. Although there is no actual data to support the level of infestation from these two generalist pests, growers have noticed the compromise in quality or reduction in price for shelled nuts.

Despite a good start and carrying a heavy crop lead, Georgia's pecan production was heavily impacted by Hurricane Helene, which passed through Georgia in late September of 2024. Almost one-third of the total acres under cultivation was destroyed, and this loss will be realized for a long time until those areas are re-planted or new areas are planted.

Sorghum

Sorghum acreage and yield estimates in 2024 were not available. Sorghum acreage was about 30,000 acres for grain production and 12,000 acres for forage/silage production. Grain yield probably averaged about 50 bushel/acre. The price received also is not available for 2024 but was probably similar to corn at about $5.00 per bushel. Acreage was stable compared to a few years ago but continues to be limited by low commodity prices and cost of controlling the sorghum aphid (SA). Anthracnose disease also was damaging in some cultivars. SA infestations were first detected in late May in southern GA and throughout the state by the end of June. SA infestations were not severe in most fields, although some fields of susceptible hybrids were sprayed for control. Lower SA infestations and damage may be due in part to weather

conditions and increased prevalence of natural mortality factors. An increasing number of grain-type hybrids are available with good levels of plant resistance to SA, while silage type hybrids remain mostly susceptible to SA. Control of SA in silage and forage sorghum is problematic. Virtually all grain sorghum hybrids were pretreated with neonicotinoid insecticide seed treatment (clothianidin, thiamethoxam or imidacloprid) which provided good control for SA for 30-35 days after planting. Sivanto prime and Transform WG are registered and effective for SA control. Estimated cost of insecticide application for SA control was about $15 to $20 per acre. Sorghum midge infestations were absent or very low. Some later planted fields were treated for fall armyworm in the whorl or headworms (fall armyworm, corn earworm and/or sorghum webworm) on the grain heads. Loss of chlorpyrifos means late planting of sorghum in hot, dry conditions is at greater risk of damage by lesser cornstalk borer. About 110 acres of sweet sorghum is grown in Georgia for syrup production with a retail value of about $5,000 per acre. Sivanto prime is now labeled for use on sweet sorghum for syrup production and was used on nearly all acres which prevented severe damage by SA in sweet sorghum fields in 2024.

Soybean

Insect pest problems in soybean were relatively minor during 2024. Soybeans were harvested on 162,000 acres with an average yield of 47 bushels per acre. This yield per acre was a state record. Velvetbean caterpillar, stink bugs, soybean looper, and kudzu bugs were the most common pests treated; 65, 65, 18, and 8 percent of acres were treated respectively. The average number of insecticide applications per acre was 1.57, yield loss was 3.51%, and the total cost associated with insect pests (losses plus control costs) was $37.32 per acre.

Turfgrass and Forages

The big topic was fall armyworm. Populations began building early and reached treatable levels in late June - early July, a month or more earlier than we usually see. By late July, populations across the state surpassed even the numbers seen in past "outbreak" years, and loss of forage and hay yields caused alarm among producers and cattlemen from South GA up into the mountains. Turf in landscapes of all types was also affected, but options for management in turf are much more robust so "losses" were less extreme. Most hayfields and many pastures were treated with insecticides; many received multiple applications, and control failures were common. Although insecticide resistance was blamed for some failures, factors such as weather, application conditions, and sheer number of caterpillars were probably as much to blame for lack of control.

Urban and Structural: No report submitted

Vegetables: No report submitted

Wheat

Planted wheat acreage in 2024 was about 145,000 acres with about 60,000 acres harvested for grain. The amount of acreage was a little less than the previous year and remained low by historical standards. Average statewide yield was 59 bushels/acre at $5.60/bushel. However, some farmers harvested 80-100 bushels/acre under a high-input system. Resistant varieties continue to be the main line of defense against the Hessian fly. Hessian fly infestations were

low to moderate in late winter and spring of 2024 across most of the coastal plain region. Hessian fly ratings found that some varieties that were previously resistant are now susceptible, indicating a shift in fly virulence to older sources of plant resistance. Infestations and damage were moderate in northern Georgia. Aphids and barley/cereal yellow dwarf disease levels were generally low to moderate in the coastal plain region but caused some damage in northern Georgia. Cereal leaf beetle infestations were low, but some fields were treated in east-central Georgia. In addition, about 200,000 acres of winter rye were planted for winter grazing, and 30,000 acres of winter oats and 500 acres of winter barley were planted in Georgia. Aphids and barley yellow dwarf infection was a problem in some early planted oat fields. Winter barley acreage is increasing due to interest in malting barley for craft beer production.

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