

# WISCONSIN PEST BULLETIN

Timely crop pest news, forecasts, and growing season conditions for Wisconsin



STATE OF WISCONSIN DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION PLANT INDUSTRY BUREAU  
2811 Agriculture Dr. Madison, WI 53718 • <http://pestbulletin.wisconsin.gov>

## WEATHER & PESTS

Soaking rain disrupted late planting in Wisconsin, though favorable warmer temperatures accelerated growth of fruit trees, summer crops, and vegetables that have been behind in development this season. Following a week of drier conditions, numerous showers and thunderstorms dampened the state, renewing concerns for excessive moisture on crops and further delaying post-emergence weed control and other fieldwork. Many locations received between  $\frac{1}{4}$  and  $\frac{3}{4}$  inch of rain, with a few areas such as Green Bay and La Crosse receiving over an inch. Daytime temperatures were more seasonal for late June, as highs peaked in the mid-80s, while lows were mild in the 50s and 60s. According to the USDA NASS, both corn and soybean planting and emergence remained slightly more than two weeks behind last year and the 5-year average. The season's first hot spell forecast for the weekend ahead is expected to boost crop growth by month's end.

## LOOKING AHEAD

**JAPANESE BEETLE:** Adults are likely to begin appearing in the week ahead. Damage to fruit trees, ornamentals, nursery stock and field crops can be expected for the next two months across most of the state, with peak beetle emergence occurring by early August. Soil-

applied systemic insecticide treatments must be made 3-4 weeks in advance of beetle emergence and are no longer advised.

**EUROPEAN CORN BORER:** The tallest corn is now susceptible to infestation by first-generation corn borers. Leaf feeding and small larvae were observed on June 26 in Dane County. Early signs of damage, including leaf pinholes and shot holes, should be noticeable in southern and central Wisconsin fields next week.

**SPOTTED WING DROSOPHILA:** Emergence of flies was documented in La Crosse County on June 17. The first capture of SWD adults in survey traps should be viewed as an early warning to fruit growers to increase monitoring efforts and make preparations for SWD management.

**APPLE MAGGOT:** Apple growers concerned about this pest are advised to set a minimum of three traps per 10 acres before the end of the month, increasing the density in July to one trap every 200-300 feet along the orchard perimeter. The traps should be hung at eye-level adjacent to wild hosts and near early-ripening cultivars. Last season, the first flies were captured during the week of June 21-27.

**TRUE ARMWORM:** Larvae are migrating into the perimeter rows of corn, and reports indicate localized problems have developed in a few Fond du Lac County fields. In-

creased monitoring for first-generation armyworm larvae is particularly important at this time.



True armyworm larva

Krista Hamilton DATCP

**SOYBEAN APHID:** Early colonies were observed for the first time this season on June 19 in Columbia County. Surveys this week detected aphids in three of 24 soybean fields sampled. Densities were low and ranged from 1-6 per infested plant on 1-4% of plants. The aphids were found in Eau Claire, Pepin and Trempealeau counties.

**POTATO LEAFHOPPER:** Nymphs are appearing in alfalfa. Counts of this stage and the adults are currently below the economic threshold of one per sweep in 8- to 11-inch fields and two per sweep for alfalfa 12 inches or taller, but populations could increase abruptly with the hot weather ahead. Routine sampling of second-crop alfalfa is recommended.

**CORN ROOTWORM:** Peak or 50% egg hatch should occur by July 1 near Madison. The first beetles usually appear around Independence Day, but will be 1-2 weeks late this year.

**LILY LEAF BEETLE:** UW Entomologist PJ Liesch has confirmed the distribution of this pest in Taylor County, noting that the recognizable bright red beetle may have been established in the area for a year or two. Taylor is the eighth Wisconsin county in which the lily leaf beetle has been detected since 2014.

## FORAGES & GRAINS

**POTATO LEAFHOPPER:** Nymphs are appearing in second-crop alfalfa. Counts in 10 to 16-inch fields in Buffalo, Eau

## DEGREE DAYS JANUARY 1 - JUNE 19

LOCATION	50°F	2018	NORM	40°F
Dubuque, IA	966	1230	1039	1733
Lone Rock	874	1083	—	1590
Beloit	879	1052	1051	1601
Sullivan	783	955	973	1456
Madison	856	1035	998	1580
Juneau	731	981	—	1385
Racine	657	835	—	1311
Waukesha	735	878	—	1406
Milwaukee	676	865	862	1339
Hartford	712	929	—	1361
Appleton	675	955	—	1311
Green Bay	646	912	852	1275
Big Flats	716	1009	—	1375
Hancock	672	923	976	1307
Port Edwards	677	934	948	1303
La Crosse	808	1154	1099	1524
Eau Claire	767	1076	976	1425
Cumberland	629	879	885	1188
Bayfield	477	726	—	978
Wausau	576	846	870	1124
Medford	575	842	785	1115
Crivitz	623	871	—	1199
Crandon	561	785	686	1082

*Method: Modified B50; Modified B40 as of January 1, 2019. NORMALS based on 30-year average daily temps, 1981-2010.*

Claire, Trempealeau, Pepin and Pierce counties are below threshold at 0.3-0.8 per sweep, while levels in Dodge, Green and Rock counties are similar at 0.2-0.6 per sweep. The weekly average in 32 surveyed fields was 0.5 per sweep. Crop scouts are reminded that potato leafhopper nymphs are seldom recovered in the bottom of the sweep net with the adults, but are instead found around the collar of the net. The neon-green nymphs move sideways when disturbed. Economic thresholds for this pest are based on mixed counts of adults and nymphs and are as follows: 0.5 per sweep for 3- to 7-inch alfalfa, 1.0 per sweep for 8- to 11-inch alfalfa, and 2.0 per sweep for alfalfa 12 inches or taller.

**ALFALFA WEEVIL:** Larval populations are now less than 0.2 per sweep and pupation is beginning in southern and central Wisconsin. The alfalfa weevil season is expected to end by early July without significant damage observed this year. Nevertheless, alfalfa should be regularly scouted through harvest and until new growth of the second crop is established.

**PLANT BUG:** Surveys conducted in the southern west-central counties yielded unusually low averages of less than 0.2 adults and nymphs per sweep, which is very low in comparison to the economic threshold of five per sweep in alfalfa. Both the alfalfa plant bug and tarnished plant bug species can be found in sweep net collections.

**PEA APHID:** Average counts of this insect remain similar to last week at four per sweep, with a range of 1-10 per sweep. Pea aphid levels have increased throughout June, which is contrary to their usual pattern of peaking by early June and then decreasing sharply before the end of the month.

## CORN

**EUROPEAN CORN BORER:** The spring flight of moths has peaked in southern and central Wisconsin. Black light trap counts have been low since the flight began during the week of May 30-June 5, with weekly counts ranging no higher than 14 moths per trap. Oviposition is intensifying and shot hole feeding by first-instar ECB larvae was confirmed on June 26 in Dane County.



European corn borer pin hole feeding

Krista Hamilton DATCP

**STALK BORER:** Larval infestations are below 5% in most fields. This perimeter pest migrates from perennial grasses and broadleaf weed hosts in June and infests mainly the first 4-6 rows of corn. Significant damage is unlikely once plants have developed past the V7-V8 stages. Spot treatment should be considered if 4-5% of plants are infested.

**TRUE ARMYWORM:** Larvae have been active in corn and winter rye cover crop fields in the local area east of

Fond du Lac, and where some V5 corn has reportedly been treated for armyworm control. DATCP surveys found non-economic damage affecting 1-2% of corn plants in about 30% of sites checked in the past week. Field conditions remain very favorable for armyworm problems, and this week's observations suggest that increased vigilance is in order.

**WESTERN BEAN CUTWORM:** Pheromone traps are now being placed at selected sites statewide in preparation for the annual moth flight. Participants in the western bean cutworm monitoring program should begin reporting counts to Tracy Schilder at [tracy.schilder@wisconsin.gov](mailto:tracy.schilder@wisconsin.gov) no later than July 3.



Western bean cutworm moth

Jocelyn Smith University of Guelph

**GRANULATE CUTWORM:** This moth, which closely resembles the western bean cutworm (WBCW) adult, often appears in black light traps 1-2 weeks in advance of the WBCW flight. The granulate cutworm is noticeably smaller, about  $\frac{3}{4}$  of the size of the WBCW moth. Based on below-normal degree day accumulations, the annual flight of WBCW adults is unlikely to begin until the first week of July this year.

**CORN ROOTWORM:** Egg hatch has been underway since early June and will peak across much of the state by early to mid-July. Corn root pruning assessments can begin about a week after the peak (50% egg hatch) has occurred. Continuous corn and areas with Bt performance issues should be the highest priority for inspection and root ratings.

**BLACK CUTWORM:** The threat from this usually early-season pest has not subsided. On June 24, a crop consultant reported that he observed "the largest infestation

of black cutworm in at least 15 years” in Fond du Lac County corn. The field was previously alfalfa no tilled into corn. Although DATCP surveys have found scattered, minor black cutworm infestations this month, severe cutworm problems appear to be isolated, which is surprising given the late planting season and large spring moth migration. Continued scouting is recommended for corn that has not yet reached the V5 stage.

## SOYBEANS

**SOYBEAN APHID:** Early colonies have been found in soybeans in Columbia, Eau Claire, Pepin, Sauk, and Trempealeau counties since June 19. Counts remain extremely low in most fields. Of the 28 sites surveyed from June 19-26, one had a count of 87 aphids per 100 plants, three had averages below 10 aphids per 100 plants, and 86% of the fields had no detectable aphid population. Routine monitoring for aphids should begin by mid-July.

**ROSE CHAFER:** This insect is common this season, and light damage is apparent in soybean fields on sandy soils in the southern and western Wisconsin. Defoliation levels have not exceeded the 30% threshold for pre-bloom soybeans in any field checked by DATCP as of June 26.



Rose chafer

Krista Hamilton DATCP

**SAND CHAFER:** Low to moderate populations were encountered in soybeans and corn near Holmen in La Crosse County in the past week. The adult beetles, notable for their similarity to Japanese beetles, ordinarily do not cause economic damage to crops, though injury by the immature grubs to potato tubers has been reported. Only light leaf feeding was observed in the soybean fields with sand chafer beetles.

**SOYBEAN DEFOLIATORS:** A variety of minor defoliators can be found at very low levels in many soybean fields. Included in this category are bean leaf beetles, green fruitworm larvae, grasshopper nymphs, obliquebanded leafrollers, rose chafers, silver-spotted skipper larvae, and thistle caterpillars, all of which were noted on fewer than 2% of plants examined in fields surveyed during the reporting period ending June 27. Prebloom soybean fields with combined defoliation rates of 30% or more may qualify for treatment, though defoliation in the vegetative stages seldom results in yield loss, especially when soil moisture, temperatures and other growing conditions are favorable. The economic threshold is lowered to 20% defoliation once soybeans reach the bloom and post-bloom stages.



Thistle caterpillar on soybean leaf

Tracy Schilder DATCP

## FRUITS

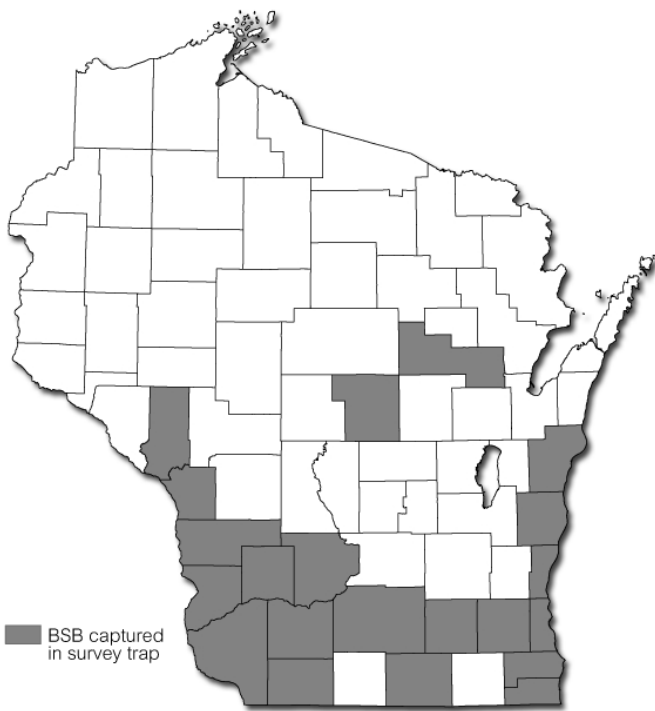
**APPLE MAGGOT:** Emergence of adults is anticipated in the next two weeks. Initial apple maggot treatments should begin 7-10 days after the first fly is captured on a yellow sticky trap and immediately if the fly is found on a red sphere, with later sprays following at 10- to 14-day intervals as long as flies are appearing on traps. A trapping density of one trap every 200-300 feet placed along the perimeter row is suggested. Orchards with past severe AM problems should also place a few traps in the orchard interior. The economic threshold for apple maggot control is one fly per unenhanced trap per week or five flies per enhanced trap per week.

**BLACK STEM BORER:** This Asian ambrosia beetle (*Xylodendrus germanus*) was identified on June 4 in an apple tree in a Lafayette County orchard. The infested tree was

showing symptoms of decline including wilted and drooping leaves, and about 20 borer holes were noted in the trunk. Several of the holes had protruding columns of frass indicative of ambrosia beetle infestation.

Black stem borer attacks a wide range of fruit trees and hardwoods, has been documented by DATCP in 21 Wisconsin counties since 2013. Until the Lafayette County report, there had been no confirmed cases of apple tree damage in the state. Orchards in Michigan, Ohio and other northeastern states have had issues with this pest in the last few years, and in western New York, the beetles have reportedly killed large numbers of apple trees.

### Black Stem Borer Detections 2013-2019



Wisconsin Department of Agriculture, Trade and Consumer Protection



**CODLING MOTH:** The spring flight has peaked in most southern Wisconsin orchards, though trap counts remain high at some sites. Economic captures of five or more moths per trap per week were reported from 11 of 27 cooperating locations (41%) from June 20-26. Apple growers are advised to continue monitoring degree days and CM trap counts until 650-700 units (modified base 50°F) have accumulated from the spring biofix to determine if additional late flights require treatment. Most orchards south of La Crosse have accumulated about 325-410 degree days since June 1 when the biofix was

set at warmer southern sites. Signs of fruit damage are becoming apparent, and scouting fruits for tiny, circular entry wounds should be underway.

**POTATO LEAFHOPPER:** Levels of this insect have increased abruptly in the last two weeks. Non-bearing, one- to two-year-old apple trees are most susceptible to feeding by leafhopper adults and nymphs and should be inspected for upwards leaf cupping and yellowing of terminal shoots. Treatment is justified at levels of one or more nymphs per leaf when symptoms are developing.



Potato leafhopper adult

Krista Hamilton DATCP

**SAN JOSE SCALE:** Crawlers are emerging from beneath scales in southern and western Wisconsin orchards. Known "hotspots," or areas of suspected high SJS pressure, can be monitored using black electrical tape on scaffold branches. The tape should be wrapped adhesive side-down, and a thin layer of petroleum jelly applied to the outer side of the tape. Captures of 10-15 crawlers on several taped branches over the course of a few days, or 10 crawlers on one tape, may warrant application. Treatments should be applied once the yellow crawlers are active, but before their white, waxy coverings (white cap stage) start to form on the leaves and branches. Conventional products for summer control include Esteem (pyriproxyfen) or Movento (spirotetramat). Options for organic growers are summer oil and encouraging biological control.

**DOGWOOD BORER:** This clearwing moth began appearing in pheromone traps last week. The traps do not indicate the need for control, but instead signal when to begin scouting for evidence of DWB larval feeding, such as frass around the graft union of trees. DATCP cooperators should be aware that the commercially available

DWB pheromone lure attracts several native clearwing moth species, therefore accurate identification is important. The correct height for DWB traps is 3-4 feet above the ground. Scouting for this pest is especially important for orchards with new trees planted in the last five years.

**JAPANESE BEETLE:** Adults are expected to start emerging next week, suggesting that Neem oil repellent sprays or neonicotinoids must be applied soon, while populations are low and the beetles are beginning to immigrate into orchards. Neem oil is appropriate for organic systems and effective when applied repeatedly. PyGanic is another organically acceptable method for immediate contact control, but the material dissipates quickly if applied during the day. A third option is Surround WP (kaolin clay) which deters both Japanese beetle and apple maggots, although its efficacy against Japanese beetle is inconsistent.

## VEGETABLES

**COLORADO POTATO BEETLE:** Larvae from overwintered beetles are predominantly in the early instars in southern and central Wisconsin. Controls should begin at this time, now that egg masses have hatched and while the majority of larvae are still small. Most first-generation CPB larvicide products must be reapplied 2-3 times at 7 to 10-day intervals to control populations.



Colorado potato beetle larvae

Krista Hamilton DATCP

**SQUASH VINE BORER:** The summer emergence of moths is anticipated next week. Their presence signals that vegetable growers should begin checking vine crops for the flat, brown eggs deposited at the base of stems. Control is required immediately after the eggs are found to pre-

vent the larvae from boring into the vines. Gardeners may remove the eggs by scraping them off with a fingernail. Covering plants with row covers or netting to prevent egg deposition and placing yellow pheromone-baited sticky traps around plantings may also help to reduce problems. A conventional insecticide or kaolin clay applied to the plant bases as a weekly spray during the three- or four-week egg laying period can provide protection if the sprays thoroughly cover the plant stems and are applied repeatedly to assure good control.



Squash vine borer moth

Krista Hamilton DATCP

**POTATO LEAFHOPPER:** Populations have increased noticeably since mid-June, and nymphs are appearing in alfalfa and other crops. A threshold of one nymph per 10 leaves or one adult per sweep indicates control is justified for snap beans. The threshold for potatoes is 2.5 nymphs per 25 leaves or 0.5-1.0 adult per sweep.

**CUTWORMS:** A Milwaukee County CSA grower reports experiencing the worst cutworm infestation of her 20 years of growing. The caterpillars have invaded her hoop-houses and are attacking seedlings under lights in her garage. Cutworms are active throughout the summer, but are rarely a problem after spring. Problems can be reduced by placing aluminum foil or cardboard collars around transplants to create a barrier that stops cutworm feeding. If damage or larvae are discovered, the cutworms should be physically removed and crushed or dropped into soapy water.

**RED TURNIP BEETLE:** This red and black beetle has been observed in Adams County alfalfa. Red turnip beetle is a sporadic pest in the Central Sands area of the state, feeding on plants in the mustard family. Hosts include broccoli, cabbage, kohlrabi, radish and turnip, but hoary alys-

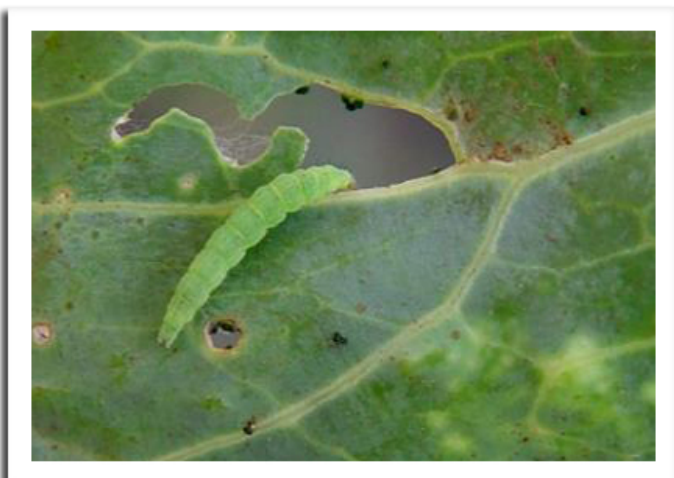
sum and yellow rocket are thought to be the primary food plants. Small seedlings and transplants are the most susceptible to red turnip beetle feeding, while established plants can tolerate severe defoliation. Removing the adult beetles by hand is the recommended control. Beetle numbers usually decline by early to mid-July.



Red turnip beetle

Doug Waylett flickr.com

**CABBAGE CATERPILLARS:** Low to moderate infestations of diamondback moths and imported cabbageworms were recently observed in southern and western Wisconsin community gardens. The larvae of these cabbage pests feed on leaves and cause large ragged holes, eventually infesting the developing heads of broccoli, cabbage and cauliflower.



Diamondback moth larva

infonet-biovision.org

Treatment thresholds are reached when 10% of cabbage in the early heading to mature head stages are infested, or 10% of broccoli and cauliflower in the first flower or curd to maturity phase are damaged. Cole crop growers

are reminded that imported cabbageworms, diamondback moths and cabbage loopers are considered to be a single caterpillar complex, and the same infestation threshold applies to all three species. *Bacillus thuringiensis* (Bt) and chemical insecticides are effective controls for small caterpillars.

**STRIPED CUCUMBER BEETLE:** Continued inspection of plants for these yellow and black striped beetles is advised. Populations are high in some western Wisconsin gardens, with vegetable growers reporting serious damage to cucurbits. Beetle control may be justified in home gardens and larger commercial muskmelon or cucumber operations for populations of 4-5 beetles per 50 plants. Bacterial wilt infection can develop when only 10% of the population are carriers of the pathogen.

## NURSERY & FOREST

**PSEUDOMONAS BACTERIAL BLIGHT:** Nursery inspectors found symptoms of this bacterial disease on 'Ann' magnolia in Iron and Marathon counties. Bacterial leaf blight was previously noted on several varieties of common lilac shrubs in late May, in southern Wisconsin nurseries. Although the causal pathogen *Pseudomonas syringae* is named for lilac, from which it was first isolated, it has a wide host range. On magnolia, symptoms of infection appear as angular, dark brown leaf spots that may have a yellowish halo. Problems can be exacerbated by overhead watering and are usually more common in seasons with prevailing cool, wet weather.



Pseudomonas leaf spot on magnolia 'Ann'

Timothy Allen DATCP

**INVASIVE RIBBON GRASS:** The ribbon grass species *Phalaris arundinacea* var. *picta* was being sold at a Chip-

pewa County nursery, a violation of the DNR Chapter NR 40 Invasive Species Rule. Under the rule, ribbon grass is classified as a “Restricted” invasive species considered to be established in the state and have the potential to “...cause or have the potential to cause significant environmental or economic harm....”

Ribbon grass has now invaded Wisconsin landscapes near wetland habitats and other riparian areas, where it outcompetes native vegetation. This perennial bunchgrass has flat blades with a rough texture on both the upper and lower surfaces. The ligule is large (up to ½ inch long) and transparent. The single-floret flowers bloom from May to June.

Control of ribbon grass is labor-intensive and costly, often requiring sequential years of mechanical and chemical intervention (mowing, hand pulling, soil tilling, herbicide application, etc.) and burning.



Invasive ribbon grass

Gerald Klingaman uaex.edu

**GYPSY MOTH:** *Bacillus thuringiensis* var. *kurstaki* (Btk) treatments were applied to approximately 19,575 acres in Barron, Buffalo, Burnett, Crawford, Chippewa, Douglas, Dunn, Eau Claire, Iowa, Grant, Green, La Crosse, Lafayette, Pepin, Vernon, and Washburn counties this spring, with all Btk spraying ending for the 2019 season on June 6. Mating disruption, or pheromone treatment, is scheduled to begin on June 28 in southwestern Wisconsin. Unlike the earlier spring treatments that targeted gypsy moth caterpillars, mating disruption targets adult male moths by interfering with the male’s ability to find females.

**LILY LEAF BEETLE:** Adults, eggs, and larvae were found at multiple locations in Oneida County earlier this month. UW Entomologist PJ Liesch also confirmed beetles in

Taylor County on June 26. First reported in Marathon County in 2014, LLB has now been confirmed in eight Wisconsin counties. The adult beetles are bright red and conspicuous, while the larvae can be found by inspecting Asiatic lily leaves for defoliation. The leaf damage caused by LLB larvae can be significant and, without intervention, will eventually kill the plant. Recommended controls include manually removing and killing adults and larvae, scraping eggs from the undersides of leaves, or applying an insecticide labeled for use on ornamental plants.



Lily leaf beetle

Timothy Allen DATCP

**CROWN RUST:** The orange-yellow spots characteristic of this rust disease were observed on ‘Fine Line’ buckthorn during recent nursery inspections in Marinette County. Although not particularly damaging to buckthorn, the spots produce spores capable of infecting oats and significantly reducing grain yield. The extent and severity of infection varies from year to year, depending on weather, the amount of rust inoculum present, and the acreage of susceptible varieties. Cool, humid weather favors rust development. Recommended controls include pruning out and destroying infected leaves, watering during the morning hours, and keeping the leaves as dry as possible. In some years, heavy amounts of rust inoculum on the buckthorn host may indicate greater rust potential for oats.



## APPLE INSECT &amp; BLACK LIGHT TRAP COUNTS JUNE 20 - 26

COUNTY	SITE	STLM <sup>1</sup>	RBLR <sup>2</sup>	CM <sup>3</sup>	OBLR <sup>4</sup>	DWB <sup>5</sup>	LPTB <sup>6</sup>	BMSB <sup>7</sup>	AM RED <sup>8</sup>	YELLOW <sup>9</sup>
Bayfield	Keystone	4	0	0	0	0	5			
Bayfield	Orienta	2	0	0	—	0	0			
Brown	Oneida	0	2	8	8	8	3	0		
Columbia	Rio	64	7	3	12	0	0			
Crawford	Gays Mills	76	0	3	—	—	8			
Dane	DeForest	30	0	2	3	—	0			
Dane	Mt. Horeb	66	14	6	2	0	0	0		
Dane	Stoughton	—	—	—	—	—	—			
Fond du Lac	Campbellsport	18	3	0	0	0	3	0		
Fond du Lac	Malone	5	0	2	2	22	6			
Fond du Lac	Rosendale	11	23	2	6	1	3	0		
Grant	Sinsinawa	193	26	4	6	—	—			
Green	Brodhead	31	6	5	4	58	15			
Iowa	Mineral Point	565	7	11	11	—	25	0		
Jackson	Hixton	4	0	5	5	0	4			
Kenosha	Burlington	135	0	5	6	8	18	0		
Marathon	Edgar	183	2	7	2	—	28	0		
Marinette	Niagara	2	0	0 <sup>MD</sup>	1	0	0			
Marquette	Montello	244	1	2	27	0	0	0		
Ozaukee	Mequon	5	0	2	0	—	0	0		
Pierce	Beldenville	0	1	3	0	—	0	0		
Pierce	Spring Valley	0	3	0 <sup>MD</sup>	12	10	28	0		
Racine	Raymond	177	0	21	16	—	26			
Racine	Rochester	130	0	8	17	0	0	0		
Richland	Hill Point	49	0	8	2	—	19			
Sheboygan	Plymouth	9	2	0 <sup>MD</sup>	3	22	12			
Walworth	East Troy	63	0	0 <sup>MD</sup>	10	4	12			
Walworth	Elkhorn	30	0	0 <sup>MD</sup>	21	14	22			
Waukesha	New Berlin	100	6	21	13	—	23			

<sup>1</sup>Spotted tentiform leafminer; <sup>2</sup>Redbanded leafroller; <sup>3</sup>Codling moth; <sup>4</sup>Obliquebanded leafroller; <sup>5</sup>Lesser peachtree borer; <sup>6</sup>Dogwood borer; <sup>7</sup>Brown marmorated stink bug; <sup>8</sup>Apple maggot red ball; \*Unbaited; \*\*Baited; <sup>9</sup>Apple maggot yellow board; <sup>MD</sup>Mating disruption.

COUNTY	SITE	BCW <sup>1</sup>	CEL <sup>2</sup>	CE <sup>3</sup>	DCW <sup>4</sup>	ECB <sup>5</sup>	FORL <sup>6</sup>	SCW <sup>7</sup>	TA <sup>8</sup>	VCW <sup>9</sup>	WBC <sup>10</sup>
Columbia	Arlington	1	4	0	0	5	0	0	16	0	0
Columbia	Pardeeville	0	0	0	1	9	0	17	32	0	0
Dodge	Beaver Dam	0	0	0	3	0	0	18	18	0	0
Fond du Lac	Ripon	0	0	0	0	0	0	1	4	0	0
Grant	Prairie du Chien	—	—	—	—	—	—	—	—	—	—
Manitowoc	Manitowoc	0	2	0	0	0	0	1	12	0	0
Marathon	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	Sparta	0	0	0	0	11	2	6	0	3	0
Rock	Janesville	0	0	0	0	3	0	1	76	0	0
Walworth	East Troy	1	0	0	3	4	0	0	2	0	0
Wood	Marshfield	3	2	0	0	0	1	45	17	0	0

<sup>1</sup>Black cutworm; <sup>2</sup>Celery looper; <sup>3</sup>Corn earworm; <sup>4</sup>Dingy cutworm; <sup>5</sup>European corn borer; <sup>6</sup>Forage looper; <sup>7</sup>Spotted cutworm; <sup>8</sup>True armyworm; <sup>9</sup>Variegated cutworm; <sup>10</sup>Western bean cutworm.