

# 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

Showers and thunderstorms continued throughout the state, extending an already-protracted planting season. Rainfall totaled ¼ to 1½ inches during the week, with the highest amounts recorded in the northern counties. The precipitation maintained surplus moisture for crops, disrupted alfalfa harvesting, and compounded a very wet start to summer. Below-normal temperatures were coupled with rainy weather, as daytime highs reached only the 60s and 70s for much of the week. Overnight lows ranged from the 40s to lower 60s. According to the latest UW Vegetable Crop Update, the prevailing cool and wet weather has created appropriate conditions for late blight development in the state's main potato production areas, and preventive fungicide applications are beginning. Corn planting has been completed statewide, but delayed planting has permitted feeding by black cutworm larvae to persist later into June than normal. Soybean planting was approximately 96% complete at the start of the week, with 84% of the crop emerged.

## LOOKING AHEAD

**WESTERN BEAN CUTWORM:** Moths have begun appearing in pheromone traps, signaling the start of the annual flight. One was caught on June 18 near Janesville in Rock County and 14 others were collected at sites in Columbia,

Dodge and Green Lake counties. Scouting corn plants for egg masses and small larvae is recommended for advanced southern and western fields in the week ahead.

**EUROPEAN CORN BORER:** Larvae produced by the spring moth flight are in the first and second instars, and fresh whorl feeding is becoming detectable in a few taller southern Wisconsin cornfields. The treatment window for first-generation corn borers has opened with the accumulation of 800 degree days (modified base 50°F).

**APPLE MAGGOT:** Flies are likely to begin emerging next week. 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.

**CODLING MOTH:** Egg hatch has peaked in most apple orchards. First-generation larvae are presently in the early to intermediate growth stages, and now is an opportune time to check fruits for entry holes and frass to assess codling moth control. Moth counts in pheromone traps varied widely this week from 1-47 per trap.

**SPOTTED WING DROSOPHILA:** Emergence of flies has been confirmed in Columbia, Dane, La Crosse and Sauk counties as of June 21. The appearance of SWD adults

should be viewed as an early warning to fruit growers to increase monitoring efforts and make preparations for possible insecticidal control. Insecticide use is not advised until SWD infestation is verified by trapping or visual inspection.

**CORN EARWORM:** Four early moths were captured in the Arlington pheromone trap between June 15 and 19. This development indicates a migratory flight into Wisconsin has occurred, and larvae could begin infesting sweet corn and vegetables next month.

**JAPANESE BEETLE:** Adults were noted to have emerged near La Crosse by June 10 and in the Beloit area on June 12. Damage to fruit trees, ornamentals, nursery stock and field crops can be expected for the next two months across most of the state, with heaviest populations potentially occurring in the western areas where the beetle's range is expanding.



Japanese beetle

Benimoto flickr.com

## FORAGES & GRAINS

**ALFALFA WEEVIL:** Larval populations are now less than 0.3 per sweep and pupation is occurring across southern and central Wisconsin. No significant alfalfa weevil problems are anticipated for the remainder of the season.

**POTATO LEAFHOPPER:** Nymphs are appearing in second crop alfalfa. Populations remain below-threshold in 12 to 20-inch fields, with a few exceptions. Two fields surveyed in Richland County and one in Vernon County had averages above 2.0 per sweep and mild hopperburn was evident. Treatment could be justified in these fields.

## DEGREE DAYS JANUARY 1 - JUNE 21

| LOCATION     | 50°F | 2016 | NORM | 40°F |
|--------------|------|------|------|------|
| Dubuque, IA  | 1110 | 1023 | 934  | 1931 |
| Lone Rock    | 983  | 971  | —    | 1724 |
| Beloit       | 1013 | 1030 | 945  | 1800 |
| Sullivan     | 918  | 814  | 870  | 1657 |
| Madison      | 964  | 936  | 897  | 1707 |
| Juneau       | 901  | 817  | —    | 1619 |
| Racine       | 849  | 802  | —    | 1572 |
| Waukesha     | 874  | 795  | —    | 1600 |
| Milwaukee    | 845  | 781  | 763  | 1561 |
| Hartford     | 864  | 793  | —    | 1580 |
| Appleton     | 820  | 752  | —    | 1498 |
| Green Bay    | 789  | 704  | 758  | 1455 |
| Big Flats    | 890  | 865  | —    | 1568 |
| Hancock      | 814  | 865  | 875  | 1464 |
| Port Edwards | 804  | 840  | 850  | 1449 |
| La Crosse    | 995  | 1029 | 989  | 1748 |
| Eau Claire   | 880  | 912  | 876  | 1576 |
| Cumberland   | 655  | 782  | 789  | 1274 |
| Bayfield     | 451  | 526  | —    | 1010 |
| Wausau       | 689  | 755  | 775  | 1308 |
| Medford      | 657  | 702  | 699  | 1268 |
| Crivitz      | 727  | 626  | —    | 1339 |
| Crandon      | 591  | 652  | 613  | 1173 |

*Method: Modified B50; Modified B40 as of January 1, 2017.  
NORMALS based on 30-year average daily temps, 1981-2010.*

Counts at other sites sampled in the southern and east-central districts were generally below 1.0 per sweep.

**PLANT BUG:** Surveys conducted as far east as Brown, Oconto and Outagamie counties yielded averages of 0.1-2.4 adults and nymphs per sweep, which is still low in comparison to the economic threshold of 5.0 per sweep in alfalfa. Both the alfalfa plant bug and tarnished plant bug species are common in sweep net collections.

**PEA APHID:** Counts of this insect remain much the same as previously reported at around 1.0 per sweep. Levels have decreased sharply in most fields since peaking at 37 per sweep during the first week of June.

## CORN

**WESTERN BEAN CUTWORM:** The annual flight commenced this week in Columbia, Dodge, Green Lake and

Rock counties. Based on projected degree-day accumulations, 25% emergence of the moth population is likely to occur by July 20 as far north as Wausau in Marathon County. Crop consultants and field scouts are advised to begin inspecting pre-tassel-stage corn for eggs and small larvae as soon as the first moths are captured or reported at a nearby trap location.

**TRUE ARMYWORM:** Non-economic larval infestations affecting 1-6% of corn plants are common, with about 40% of fields surveyed in the last week showing at least a few plants with armyworm leaf-edge feeding damage and/or larvae. Increased vigilance is recommended since black light traps are registering moderate flights (27 moths at Janesville and 23 moths at Ripon from June 15-20) and because field conditions remain very favorable for armyworm problems.



True armyworm larva

Krista Hamilton DATCP

**CORN ROOTWORM:** Egg hatch has been underway since late May and should peak across much of the state before the end of the month. Corn root pruning assessments can begin about a week after peak egg hatch, or by early July. Continuous corn and areas with Bt performance issues should be the highest priority for inspection and root ratings.

**EUROPEAN CORN BORER:** Surveys this week found minor infestations affecting 1-13% of plants in a few V7-V8 fields sampled in Columbia, Jefferson, Richland and Vernon counties. Moths and first-instar larvae were the development stages observed. The larvae appeared to have hatched on June 20 or 21. Chemical and biological insecticides targeting first-generation ECB are only

effective for about a week after egg hatch, and must be applied in the next few days in fields where small larvae are emerging. The treatment window is expected to close by June 28 near Madison and La Crosse and around July 4 near Appleton and Hancock.



European corn borer pin hole feeding

Krista Hamilton DATCP

## SOYBEANS

**SAND CHAFER:** Low to moderate populations were encountered in soybeans and corn near Richland Center on June 21. The adult beetles, notable for their similarity to Japanese beetles and an attraction to light-colored clothing, are not known to cause economic damage to crops, though injury by the immature grubs to potato tubers has been reported. Only minor leaf feeding was observed in the soybean fields with significant numbers of chafers.



Sand chafer

Krista Hamilton DATCP

**ROSE CHAFER:** This insect is common this season, and light damage is noticeable in soybean fields on sandy soils in the southern two-thirds of the state. Defoliation levels have not exceeded the 30% threshold for pre-bloom soybeans in any field checked by DATCP as of June 20.



Rose chafer beetles

Krista Hamilton DATCP

**SOYBEAN APHID:** Early colonies have been found in soybean fields from St. Croix County east to Outagamie County in the last three weeks. Densities are generally below two aphids per plant (200 aphids per 100 plants), with fewer than 20% of plants infested in most fields. The highest total count observed to date is seven aphids per plant, 19 per infested plant, on 35% of plants in Trempealeau County. Routine sampling for aphids should begin by early July.

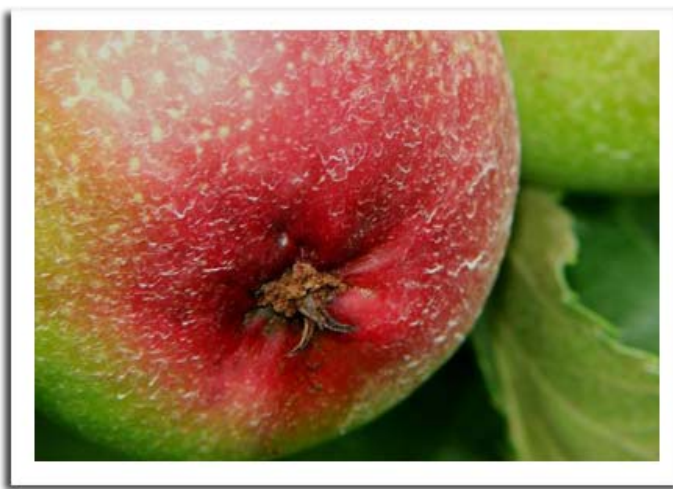
## FRUITS

**POTATO LEAFHOPPER:** Levels of this insect could increase abruptly in orchards as harvesting of second-crop hay begins. Non-bearing, one- to two-year-old 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.

**SPOTTED TENTIFORM LEAFMINER:** Moths of the second flight are emerging in greater numbers, with pheromone trap counts ranging as high as 1,270 per trap and averaging 221 per trap. The average last week was 77 per

trap. Peak moth activity should occur by July 1 across southern and central Wisconsin and a week or two later in the southeastern, east-central and northern areas. Apple orchards with populations exceeding one mine per leaf or a history of STLM damage are candidates for control of second-generation larvae.

**CODLING MOTH:** The spring flight has peaked in most southern Wisconsin orchards, though trap counts remain high at several sites. Economic captures of five or more moths per trap per week were registered at 10 of 24 locations (42%) from June 15-21. Apple growers are advised to continue monitoring degree days and CM trap counts until 700 units (modified base 50°F) have accumulated from the spring biofix to determine if additional flights will require treatment. Most orchards south of La Crosse have accumulated about 450-550 degree days since May 20 when the biofix was recorded at warmer southern sites. Signs of fruit damage are becoming apparent, and scouting fruits for tiny, circular entry wounds should be underway.



Codling moth entry in calyx

Steve Schoof NCSU

**SAN JOSE SCALE:** Crawlers are emerging from beneath scales in southern and western Wisconsin orchards. Known "hotspots," or areas of suspected high 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. Captures of 10-15 crawlers on several taped branches over the course of a few days, or 10 crawlers on one tape with zero on all other tapes, may warrant application. Treatments should be applied while 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). Organic options are summer oil and biological control.



San Jose Scale damage

[blogs.cornell.edu/jentsch/2014](https://blogs.cornell.edu/jentsch/2014)

**APPLE MAGGOT:** Emergence of the first flies of the season is anticipated next week. Initial apple maggot treatments should begin 7-10 days after the first fly appears 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.



Apple maggot fly

[Werner Eigelsreiter bugguide.net](http://Werner.Eigelsreiter.bugguide.net)

**GRAPE PHYLLOXERA:** Grape growers concerned about the appearance of phylloxera galls on grape foliage are reminded that treatments should have been applied at the first sign of gall formation several weeks ago. No insecticide can reduce or eliminate the galls once they have formed on the leaves.

**JAPANESE BEETLE:** Adults are emerging and neonicotinoids or Neem oil repellent sprays must be applied soon, while populations are low and the beetles are still immigrating 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.



Japanese beetles on grape leaf

[cindyha.wordpress.com](https://cindyha.wordpress.com)

**DOGWOOD BORER:** Pheromone traps can be placed now to provide information on the size and timing of the moth flight, as well as the larval hatch expected in July.

## VEGETABLES

**SQUASH VINE BORER:** Moths have been observed near winter squash and cucumbers in Grant and La Crosse counties since June 9. Growers of vine crops should begin checking plants for the flat, brown eggs deposited at the base of stems as soon as the moths are noticed. Control is required immediately after the eggs are found to prevent the larvae from boring into the vines. Garden-

ers 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 SVB problems. A conventional insecticide or kaolin clay applied to the plant bases as a weekly spray during the 3 to 4-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

tilburton outdoors.webshots.com

**POTATO LEAFHOPPER:** A significant migration occurred about two weeks ago and alfalfa surveys indicate adult populations are now above-threshold (two per sweep) in a few western Wisconsin fields. Nymph production has also begun, and the combination of immature leafhoppers and harvesting of second-crop alfalfa could cause an abrupt increase in leafhoppers in snap beans, potatoes and other vegetable crops by July. Sampling should be increased at this time. A threshold of one nymph per 10 leaves or one adult per sweep is specified by the UW to decide if control is justified in snap beans. The threshold for potatoes is 2.5 nymphs per 25 leaves or 0.5-1.0 adult per sweep.

**RED TURNIP BEETLE:** This red and black beetle was noted in exceptionally high numbers in Waushara County alfalfa earlier this month, and a report of damage to cole crops in a garden near Wautoma was received last week. Red turnip beetle is an occasional pest in the Central Sands area of the state that could become a problem in more home gardens since populations appear to be higher than normal this summer. Hosts include broccoli, cabbage, kohlrabi, radish and turnip, but hoary alyssum

and yellow rocket are thought to be the primary food plants. 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 begin to decline by late June or July.



Red turnip beetles collected in sweep net

Andrew Pitney DATCP

**IMPORTED CABBAGEWORM:** Damage caused by larger cabbageworms has become very conspicuous, making the velvety green caterpillars generally easy to find and remove from gardens and smaller plantings. For larger commercial cabbage crops where chemical control may be required, ICW populations should be assessed weekly by examining 25-50 randomly-selected plants (depending on field size) and recording the number of infested plants. A plant is infested if eggs or caterpillars are found.



Imported cabbageworm larva

Christian Bauer upload.wikimedia.org

Control decisions should be made based on a threshold of 30% infestation in the transplant to cupping stages;

20% infestation from the cupping to early head stages; and 10% from early heading until harvest. For broccoli and cauliflower between transplant and first flower or curd, the threshold is 50%, decreasing to 10% once flowers or curds begin to develop to maintain quality.

## NURSERY & FOREST

**DIPLODIA TIP BLIGHT:** Symptoms of this tip blight of fir, pine and spruce trees were observed on Scots pines in a Jackson County retail center. Diplodia is characterized by drooping, stunted new shoots with short, brown needles, and black fruiting bodies on infected needles. Fungicides applied earlier this spring as new growth (candles) was expanding would have prevented formation of the spores now being disseminated to infect current-year needles, but chemical control is no longer effective. If more than 10% of the trees develop severe shoot blight by late summer, a spray program is advisable next spring.



*Diplodia tip blight*

*Jill O'Donnell MSU Extension*

**BLACK SPOT ON ROSE:** This fungal disease of roses is especially prevalent this season. Diagnostic features are small, round black spots with feathery margins on the leaf surface that enlarge and cause foliage to turn yellow and drop prematurely. The black spots first appear on expanding lower leaves during wet weather, and eventually spread to the entire plant. High humidity and warm temperatures favor development of this disorder and can accelerate spore germination to bring about infections within a 24-hour period. Management includes using disease resistant cultivars, removing infected leaves and canes, planting roses in open locations with good air circulation, and avoiding overhead watering. Fungicides

applications should begin as soon as leaves emerge and continue at recommended intervals until fall.



*Black spot on rose*

*Tim Boyle DATCP*

**NOSTOC:** Nursery growers are advised to watch for development of this blue-green algae in moist growing locations and pursue aggressive control if Nostoc is found. Unlike typical aquatic algae, these matted slippery growths can survive in terrestrial sites, presenting a hazard on concrete sidewalks, in container growing areas, on pathways, and in lawns. Once established, this organism is capable of manufacturing and discharging polysaccharides which form a coating that protects it from drought and temperature fluctuations. During rain-free periods the mats dry into a black crust that regenerates with sufficient moisture.



*Nostoc*

*Yamamy en.wikipedia.org*

Chemical and cultural controls are limited due to Nostoc's ability to survive extreme conditions. In nurseries, shovel-

ing and bagging the mats for landfill disposal is optimal. Care should be taken to avoid breaking up the mass and spreading it via composting or contact contamination. On infested turf, chemical controls could include mancozeb, copper sulfate, sodium carbonate, or peroxyhydrate granules when the cyanobacteria are wet prior to application. Nostoc develops more rapidly with phosphorus fertilizer, so reducing off-target phosphorus availability from nursery stock is critical.

**SLUGS:** Persistent wet conditions are providing favorable conditions for slug activity and damage throughout much of the state. Because slugs are nocturnal feeders, plant damage occurs overnight and the cause is usually not apparent. Species such as the grey field slug, *Deroceras reticulatum*, are capable of inflicting substantial crop and garden damage, traveling up to 40 feet in one night.

Slug activity quickly subsides with drier weather, but if control is warranted, a few options are as follows: sprinkling diatomaceous earth on the soil beneath high-risk plants; encircling containers and small raised beds with copper tape; or trapping slugs with wet newspapers placed beneath boards on the ground. Baits with iron phosphate are often a good solution in mulched perennial beds.



Slug damage on hosta

[gardeningonthego.files.wordpress.com](http://gardeningonthego.files.wordpress.com)

for aphids should be underway. Control options include dislodging with a forceful spray of water, using commercially available biological controls, or treating severe problems with insecticidal soaps or horticultural oils.



Aphids on quince

[Mike slugyard.com](http://Mike slugyard.com)

**APHIDS:** A number of aphids which feed on various herbaceous ornamentals and vegetables were noted in nurseries and garden centers from Vernon to Pierce counties this week. Most plants are susceptible to aphid feeding, especially when young, and many aphid species are primary vectors of plant diseases. Routine monitoring



## APPLE INSECT & BLACK LIGHT TRAP COUNTS JUNE 15 - 21

| COUNTY      | SITE          | STLM <sup>1</sup> | RBLR <sup>2</sup> | CM <sup>3</sup> | OBLR <sup>4</sup> | OFM <sup>5</sup> | LPTB <sup>6</sup> | DWB <sup>7</sup> | AM RED <sup>8</sup> | YELLOW <sup>9</sup> |
|-------------|---------------|-------------------|-------------------|-----------------|-------------------|------------------|-------------------|------------------|---------------------|---------------------|
| Bayfield    | Keystone      | 0                 | 3                 | 2               | 2                 | 1                | 3                 | —                |                     |                     |
| Bayfield    | Orienta       | 10                | 2                 | 0               | 0                 | 0                | 0                 | 0                |                     |                     |
| Brown       | Oneida        | 300               | 0                 | 8               | 7                 | 0                | 0                 | 0                |                     |                     |
| Columbia    | Rio           | 300               | 3                 | 0               | 2                 | 0                | 2                 | —                |                     |                     |
| Crawford    | Gays Mills    | —                 | —                 | —               | —                 | —                | —                 | —                |                     |                     |
| Dane        | DeForest      | 25                | 2                 | 5               | 9                 | 0                | —                 | —                |                     |                     |
| Dane        | Mt. Horeb     | 255               | 20                | 1               | 4                 | 7                | 3                 | 1                |                     |                     |
| Dane        | Stoughton     | 104               | 51                | 16              | 22                | 1                | 6                 | —                |                     |                     |
| Fond du Lac | Campbellsport | 22                | 1                 | 0               | 2                 | 0                | 31                | —                |                     |                     |
| Fond du Lac | Malone        | 22                | 0                 | 9               | 35                | 2                | 6                 | 4                |                     |                     |
| Fond du Lac | Rosendale     | —                 | —                 | —               | —                 | —                | —                 | —                |                     |                     |
| Grant       | Sinsinawa     | —                 | —                 | —               | —                 | —                | —                 | —                |                     |                     |
| Green       | Brodhead      | —                 | —                 | —               | —                 | —                | —                 | —                |                     |                     |
| Iowa        | Mineral Point | 1270              | 87                | 3               | 3                 | 4                | 41                | 0                | —                   | **0                 |
| Jackson     | Hixton        | 33                | 7                 | 5               | 3                 | 6                | 8                 | —                |                     |                     |
| Kenosha     | Burlington    | 185               | 7                 | 2               | 9                 | 1                | 19                | 8                |                     |                     |
| Marathon    | Edgar         | 119               | 0                 | 3               | 20                | 5                | 26                | —                |                     |                     |
| Marinette   | Niagara       | 0                 | 0                 | 0               | 0                 | 2                | 14                | —                |                     |                     |
| Marquette   | Montello      | 1215              | 13                | 4               | 32                | 0                | 7                 | —                |                     |                     |
| Ozaukee     | Mequon        | 20                | 2                 | 8               | 10                | 0                | 2                 | —                |                     |                     |
| Pierce      | Beldenville   | 28                | 0                 | 9               | 0                 | 0                | 8                 | 0                |                     |                     |
| Pierce      | Spring Valley | 71                | 1                 | 1               | 1                 | 0                | 43                | 4                |                     |                     |
| Racine      | Raymond       | 182               | 2                 | 14              | 53                | 0                | 49                | —                |                     |                     |
| Racine      | Rochester     | 130               | 34                | 13              | 9                 | 0                | 0                 | 0                |                     |                     |
| Richland    | Hill Point    | 220               | 11                | 1               | 10                | 0                | 53                | 0                |                     |                     |
| Sheboygan   | Plymouth      | 598               | 0                 | 3               | 19                | 8                | 6                 | 6                | **0                 | **0                 |
| Walworth    | East Troy     | 32                | 5                 | 0               | 3                 | 0                | 4                 | —                |                     |                     |
| Walworth    | Elkhorn       | 140               | 23                | 1               | 21                | 0                | 2                 | —                |                     |                     |
| Waukesha    | New Berlin    | 35                | 3                 | 47              | 26                | 16               | 45                | —                |                     |                     |

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

| 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        | —                | —                | —               | —                | —                | —                 | —                | —               | —                | —                 |
| Columbia    | Pardeeville      | 0                | 1                | 0               | 0                | 0                | 6                 | 0                | 7               | 0                | 0                 |
| Dodge       | Beaver Dam       | 2                | 1                | 0               | 0                | 6                | 0                 | 0                | 3               | 0                | 0                 |
| Fond du Lac | Ripon            | 2                | 2                | 0               | 1                | 4                | 0                 | 0                | 23              | 0                | 0                 |
| Grant       | Prairie du Chien | 0                | 0                | 0               | 0                | 0                | 0                 | 0                | 0               | 0                | 0                 |
| Manitowoc   | Manitowoc        | 0                | 0                | 0               | 0                | 0                | 0                 | 6                | 3               | 0                | 0                 |
| Marathon    | Wausau           | —                | —                | —               | —                | —                | —                 | —                | —               | —                | —                 |
| Monroe      | Sparta           | 0                | 0                | 0               | 0                | 9                | 2                 | 0                | 1               | 0                | 0                 |
| Rock        | Janesville       | 0                | 0                | 0               | 0                | 0                | 0                 | 0                | 27              | 1                | 0                 |
| Walworth    | East Troy        | 1                | 0                | 0               | 0                | 5                | 1                 | 0                | 0               | 0                | 0                 |
| Wood        | Marshfield       | 1                | 2                | 0               | 0                | 2                | 1                 | 11               | 3               | 1                | 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.