

# 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

Dry, generally cool weather continued, slowing growth of summer crops, particularly corn and soybeans. Periods of showers and thunderstorms occurred throughout the week, but precipitation amounts were light and failed to correct moisture deficits. The persistent lack of rain has resulted in an expansion of moderate-severe drought conditions throughout the central and northern areas of the state. Dryness is most pronounced in the northeast, where after six weeks without measurable rain, soil moisture levels are very short for 78% of crop lands. Low nightly temperatures have inhibited flights by some moths, but a few warm nights should produce large numbers of important pest insects such as the western bean cutworm. More precipitation is urgently needed to prevent reduced yield potential, and in extreme cases, major crop loss.

## LOOKING AHEAD

**WESTERN BEAN CUTWORM:** Emergence accelerated this week with the capture of 703 moths at 138 Wisconsin trap locations. High counts for the period of July 17-24 were 125 moths in the pheromone trap south of Grand Marsh in Adams County and 350 moths in a black light trap located nearby. According to the degree day model for this species, the numbers registered since July 19

represent 25% emergence in the southern and west-central areas. The annual flight is expected to gain momentum in the next 1-2 weeks, and the majority of moths should appear in traps from July 26-August 2. A crop consultant report indicates the first egg masses of the season were detected on July 18 near Amherst in Portage County.

**SOYBEAN APHID:** Surveys to assess population densities should be performed at this time, while most soybeans are still in the early reproductive stages of growth. Colonies that were previously too low to detect are now reproducing more rapidly. Examination of 79 fields in the past week indicates that aphids have dispersed to 100% of the plants at approximately 30% of surveyed sites. Chemical treatments are most effective in controlling aphids and minimizing resurgence when applied during the R2-R4 stages (full bloom-full pod). All soybean fields should be checked regularly through R5.

**EUROPEAN CORN BORER:** Pupation began on July 20 near Spring Green in Sauk County, which is one of the more advanced locations in terms of degree day accumulations. At current temperatures, the first summer moths may appear in black light trap collections by July 26. Based on the low numbers of first generation larvae observed during surveys in the last six weeks, it seems probable that the second flight of corn borers will be extremely light in most areas.

**CORN ROOTWORM:** Populations of adults continue to increase and emergence is far from complete. Surveys of corn in Adams, Iowa, Juneau, Kenosha, Racine, Rock, Sauk, Walworth and Waukesha counties revealed counts of 1-8 beetles per 10 plants in 16 of 34 fields (47%) examined during the period of July 17-23. Peak emergence remains 2-3 weeks away.



Northern corn rootworm beetle

www.cirrusimage.com

## FORAGES

**POTATO LEAFHOPPER:** Surveys conducted in the southwest, west-central and central districts yielded counts ranging from 0.1-5.2 per sweep, with an average of 1.6 per sweep. Economic populations of 2.0 or more leafhoppers per sweep were detected in 9 of 30 fields (30%) checked. The highest numbers were collected this week in Adams, Juneau and Monroe counties where distinct yellowing of alfalfa, due only in part to this pest, was evident in many of the taller fields. Small nymphs were numerous, suggesting that the prevailing dry conditions have been favorable for reproduction.

**TARNISHED PLANT BUG:** Alfalfa fields surveyed in Adams, Eau Claire, Jackson, Monroe and Sauk counties contained low populations of 0.2-2.2 adults and nymphs per sweep. Only one field in Juneau County had 4.5 per sweep, which is still below the economic threshold (for this insect). Mixed counts of all plant bug species should not exceed 5.0 per sweep at any point during the growing season.

**PEA APHID:** Field observations show populations have not increased appreciably since the last report. Most fields in the central and southern areas still have less

## DEGREE DAYS JANUARY 1 - JULY 23

LOCATION	50°F	2008	NORM	48°F	40°F
Dubuque, IA	1371	1510	—	1453	2412
Lone Rock	1318	1377	—	1371	2317
Beloit	1360	1518	—	1408	2401
Madison	1301	1364	1567	1369	2301
Sullivan	1330	1439	1589	1385	2350
Juneau	1298	1376	—	1363	2289
Waukesha	1322	1339	—	1400	2324
Hartford	1282	1313	—	1360	2266
Racine	1247	1271	—	1337	2219
Milwaukee	1230	1249	1396	1306	1970
Appleton	1177	1279	1431	1247	2102
Green Bay	1075	1197	1380	1149	1970
Big Flats	1190	1258	—	1243	2116
Hancock	1208	1274	1552	1237	2122
Port Edwards	1151	1214	1472	1208	2061
La Crosse	1332	1374	1696	1350	2329
Eau Claire	1255	1238	1524	1304	2216
Cumberland	1114	1064	1448	1121	1979
Bayfield	820	831	1094	834	1547
Wausau	1022	1097	1392	1063	1877
Medford	1038	1040	1254	1078	1903
Crivitz	991	1098	—	1026	1837
Crandon	915	986	1140	914	1683

*Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2009.  
NORMALS based on 30-year average daily temps, 1971-2001.*

than 3.0 aphids per sweep, although a few exceptional fields in Monroe County contain 4.2-6.0 per sweep.

## CORN

**EUROPEAN CORN BORER:** Pupation has begun in advanced areas of the state. Most larvae are presently in the 3<sup>rd</sup> instar, but variation is great enough that there may be a prolonged flight of summer moths in August. In Adams, Eau Claire, Jackson, Juneau, Monroe and Rock counties, infestation rates range from 1-28%. The vast majority of surveyed fields in the south-central, south-east, west-central and central districts (70%) have no detectable larval population.

**WESTERN BEAN CUTWORM:** Egg deposition and larval hatch are occurring in the central and southern districts, as far north as Mondovi in Buffalo County. Corn fields should be inspected closely at this time to appraise the percentage of plants infested with egg masses and small

larvae. The eggs are deposited principally on the upper surface of the flag leaf, while the larvae can be found in the developing tassel. Treatment is justified when 8% of plants are infested and should coincide with 90-95% tassel emergence.



Western bean cutworm eggs Mark Moore, Moore Communications

**TRUE ARMYWORM:** Large numbers of armyworms registered in southern Wisconsin black light traps last month suggest that the potential for localized outbreaks of second generation larvae is high. Serious problems may develop in the next 1-3 weeks as the larval progeny mature and consume substantially more corn foliage. Although armyworm activity is generally suppressed during periods of dry weather, problems can be aggravated under such conditions as the larvae move from dried grassy weeds onto corn plants. Spot treatment is justified at infestation levels of 2 or more small larvae per plant (less than  $\frac{3}{4}$  inch) on 25% of plants or 1 larva per plant on 75% of plants. In instances where armyworms migrate to corn fields from adjacent areas, only the border rows should be treated.

**CORN LEAF APHID:** Light colonies consisting of 5-35 aphids per plant have been detected on corn from Adams to Eau Claire County. Infestation rates vary from 2.5-20% in the central and west-central areas, with an average rate of 7.5%. Colonies of 50 or more aphids per plant on 50% of plants may interfere with pollination.

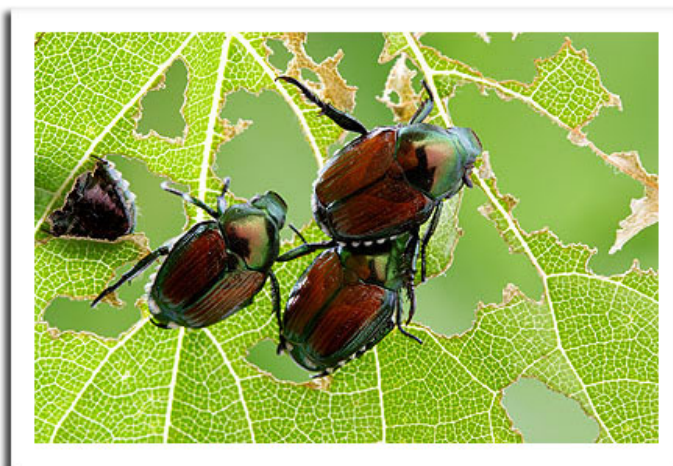
## SOYBEANS

**SOYBEAN APHID:** Surveys of R1-R2 soybeans in the southern and central counties continued to reveal mostly low populations, although a larger proportion of fields are

now 100% infested with aphids. The average number per plant (based on 20 plants sampled per field) ranged from 1-8 on 5-90% of the plants in the southwest district, 0-41 on 0-90% of the plants in the southeast district, 7-61 on 75-100% of the plants in the west-central district, 5-81 on 75-100% of the plants in the central district, and 4-17 on 65-100% of the plants in the east-central district. Recent observations indicate the problem is not uniform throughout the state or within individual fields. Thus, it is imperative to examine soybeans at regular intervals, sampling plants from several distinct locations per field. The heaviest concentrations of aphids noted in the past week were observed on plants in the peripheral rows of fields.

**SOYBEAN THRIPS:** Moderate numbers were detected on July 10 in an Eau Claire County soybean field. According to the survey report, plants throughout the field were infested with several individuals per leaf and injury was evident. No threshold has been established for soybean thrips in Wisconsin, but adjacent states recommend treatment thresholds as variable as 8-25 per leaf. This minute insect rarely causes damage to soybeans, except in high population situations on young plants or if plant growth is delayed by cool weather. Soybeans can usually compensate for the minor feeding injury inflicted by low-moderate levels of thrips.

**JAPANESE BEETLE:** Light feeding is apparent in the edge rows and scattered throughout many Wisconsin soybean fields. In Adams, Iowa, Juneau and Monroe counties, no more than 10% of plants in the marginal rows and 5% of plants in the interior show leaf skeletonization by adults. Similar levels of infestation were found as far north as Eau Claire County.



Japanese beetles

Alex Wild myremecoswordpress.com

## FRUITS

**APPLE MAGGOT:** Localized rains stimulated the emergence of flies at several locations in southern Wisconsin. In some instances, control treatments are warranted. High counts for the period of July 17-23 were 12 flies per baited red sphere near Mequon in Ozaukee County, 3 per unbaited red sphere at Hillpoint in Richland County, and 4 per yellow sticky board at Stoughton in Dane County. Sprays directed against the female flies should be applied at intervals of 7-10 days when the economic threshold of 1 fly per **UNBAITED** trap (per week) or 5 flies per **BAITED** trap is exceeded.



Apple maggot fly

entomology.ucdavis.edu

**SPOTTED TENTIFORM LEAFMINER:** The peak of the second flight has passed in Brown, Dane, Fond du Lac, Iowa, Jackson, Ozaukee, Racine, Richland and Sheboygan counties where trap counts ranged from 189-1,300 moths during the previous reporting period. Peak counts of 297-668 moths were registered this week at orchards in Marquette, Pierce and Waukesha counties. Moths of the third and final flight may begin to appear in traps at advanced locations by July 30.

**JAPANESE BEETLE:** Spot treatment of individual trees may be justified for orchards that continue to experience problems with this insect. Considerable numbers of beetles are feeding on apples, plums, raspberries and wild grapes in the southern counties. Even the smallest blemish or surface injury to fruit attracts large concentrations of adults.

**CODLING MOTH:** Frequent traps checks are advised for southern and central orchards in the next week to docu-

ment the “biofix” or sustained capture of male moths. Apple growers are reminded to alternate materials between the first and second larval generations to prevent populations from developing resistance to standard insecticides.

**EUROPEAN RED MITE:** Orchardists should be aware of the possibility of outbreaks under present dry conditions. Trees exhibiting light bronzing can be inspected for adult females on the upper and lower leaf surfaces and eggs near the midrib by using a 10x hand lens. Treatment is recommended if the economic threshold of 7.5 mites per leaf is exceeded.

**CRANBERRY REPORT:** Low temperatures and dry conditions throughout July have suppressed cranberry development and delayed the growing season by as much as 15% in the central and northern bog areas. With the bloom period more or less complete, growers are reporting normal bloom and fruit set. Most beds range from the pinhead to green pea stages, while some advanced hybrids are showing larger fruits. A sustained period of warm temperatures is needed for the cranberry crop to progress to a satisfactory harvest in September.

**FRUITWORMS:** Larval feeding by the cranberry fruitworm and the second generation of Sparganothis fruitworm was observed during the past week in Adams, Jackson, Juneau, Monroe, Portage and Wood counties. Injury was most apparent in the advanced varieties, including ‘Ben Lear’, ‘GH #1’ and ‘Pilgrim’. Control measures have been implemented in some beds.

**CRANBERRY FLEA BEETLE:** Adults were noted for the first time this season on July 19 in Jackson County. Skeletonization of cranberry foliage and other weed hosts near marshes should be visible at this time.

**BLACKHEADED FIREWORM:** Treatments to control the second generation of larvae were initiated in cranberries during the week of July 4, and very little evidence of this pest has been found since then.

## VEGETABLES

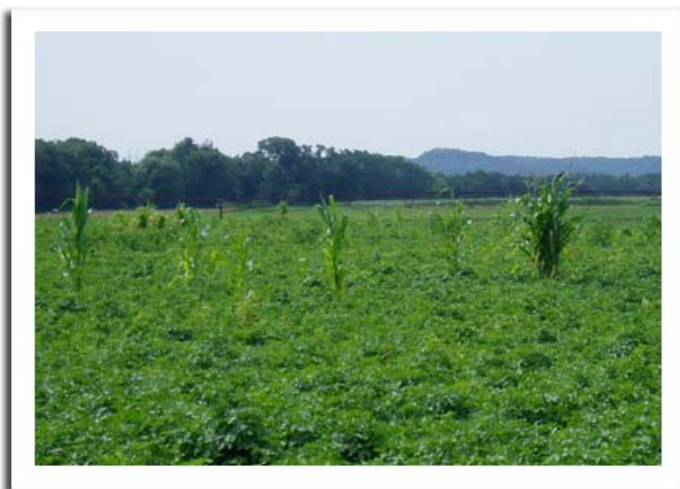
**CORN EARWORM:** Low numbers of moths are appearing in pheromone traps, but thus far no sustained flight has occurred. Corn plants with green silks during the adult flight period in August are at an elevated risk for

infestation. Counts this week were as follows: Cashton 1, Chippewa Falls 0, Janesville 0, Lancaster 0, Manitowoc 0, Marshfield 0, Sparta 0, and Tomah 2.

## WEEDS

**COMMON RAGWEED:** In the south-central and southwest counties, common ragweed plants are presently in the early flowering stages. The release of pollen by this species and giant ragweed during this phase triggers the onset of late summer allergy symptoms. According to the National Allergy Bureau (NAB) Pollen Report, a **MODERATE - HIGH** weed pollen count is predicted for the period of July 25-27. During a typical Wisconsin season, the weed pollen period begins around mid-August, peaks by late August, and ends by mid-October.

**VOLUNTEER CORN:** Light-moderate infestations of volunteer corn are appearing in fields in which glyphosate-resistant corn and soybeans were grown in rotation. This weed has become an increasing problem for soybean growers in recent years. Surveys in 2008 documented the presence of volunteer corn in 48% of 910 soybean fields examined from September-October, verifying that the problem is widespread in Wisconsin. Several post-emergence herbicides are available for the control of volunteer corn in soybeans. Including a grass herbicide as a tank mix should provide satisfactory control and eliminate the need for a second herbicide application. Refer to the June 4, 2008 issue of the Wisconsin Crop Manager for specific herbicide recommendations: <http://ipcm.wisc.edu/Default.aspx?tabid=53&EntryID=545>.



Volunteer corn

Clarissa Hammond DATCP

**GIANT RAGWEED:** Plants that evaded management earlier this month now measure 60 or more inches and are obvious in the margins of many corn, soybean and small grains fields. Surveys this week found giant ragweed in approximately 60% of fields checked. This summer annual emerges over an extended period, making it particularly difficult to control. Management options (other than manual removal) are limited at this point in the season, but growers should make note of current problem areas to plan for better control next season.



Giant ragweed

Krista Hamilton DATCP

## FOREST

**GYPSY MOTH:** Reports indicate that the emergence of this insect has been delayed by recent cool temperatures. Only 20 male moths were registered in pheromone traps as of July 22, the majority of which were collected in Rock County. Other counties that had low counts of 1-3 moths in the past week were Crawford, Juneau and Monroe. At this time last season, the total count was 828 moths from 12 Wisconsin counties. Late instar larvae are still being reported in the Bayfield area.

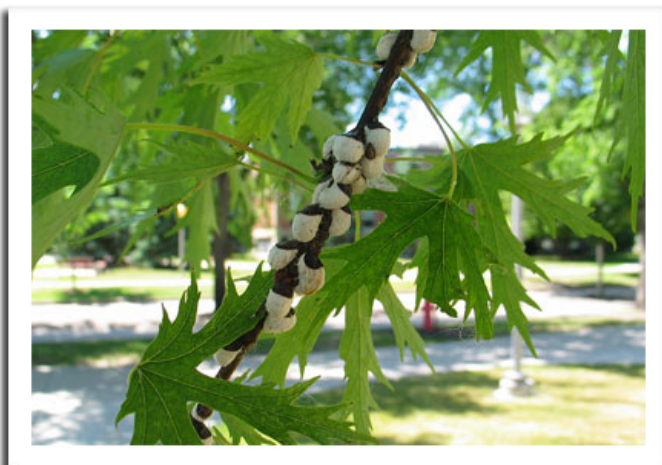
## NURSERY & LANDSCAPE

**WOOLLY APPLE APHID:** Nursery inspectors found light colonies of this aphid on crabapple trees in Dane County. Woolly apple aphids feed at wound sites (e.g. pruning cuts and cankers) on the trunks and branches of tree, causing knots or galls to form on the twigs. Underground colonies also form galls on the roots in some situations. Control is seldom warranted as there are many natural

enemies that regulate populations. Other hosts include apple, elm, hawthorn, mountain ash and pear.

**BRONZE BIRCH BORER:** The D-shaped exit holes associated with this metallic wood-boring beetle were observed on birch trees in Dane and Walworth counties. Adult bronze birch borers primarily attack trees weakened or stressed due to drought, disease, sun exposure or nutrient deficiency. Larval feeding beneath the bark prevents the movement of food and water to tissues above the feeding site, resulting in thinning or dieback of leaves and branches in the upper crown and adventitious growth in the lower crown. Infested trees also develop swollen or bumpy areas on the trunk. The risk of bronze birch borer attack can be reduced by selecting a semi-shaded, moist planting location and promoting tree vigor. Immediate removal and destruction of infested birches is recommended since the bronze birch borer kills its host within just a few years.

**COTTONY MAPLE SCALE:** The white cottony egg masses produced by this pest of deciduous trees and shrubs were noted in light-moderate amounts on red maples in Dane and St. Croix counties. As degree day accumulations approach 1,500 (base 50°F), the mobile crawlers are expected to hatch. Chemical treatments directed against the crawler stage should be considered only after two consecutive years of heavy infestation. Light infestations can be pruned out and destroyed.



Cottony maple scale

[www.vniles.com](http://www.vniles.com)

**CEDAR-APPLE RUST:** Leaves of apple and ornamental crabapple trees in Dane, Kenosha, Rock and Waukesha counties are exhibiting bright orange lesions indicative of this common fungal disease. Cedar-apple rust alternates between junipers and rosaceous plants (mostly apple,

crabapple and hawthorn), and requires both hosts to complete its life cycle. The fungus overwinters on junipers as stem galls up to 5 cm in diameter, so thorough removal and destruction of the galls is suggested. In severe cases, a series of fungicide treatments can be applied to infected rosaceous plants at 7-day intervals beginning when flower buds first show color and continuing until the cedar galls have stopped spreading spores.



Cedar apple rust

Liz Meils DATCP

## TRAPPING NETWORKS

**BLACK LIGHT TRAPS:** The first significant captures of 25-50 western bean cutworm moths were registered at Arlington, Marshfield, Mazomanie and Wausau in the past week, and an increase from 34 to 165 moths was charted at Sparta in Monroe County. With the growing season delayed by a week or more, peak flight (50% emergence) should not be expected until July 27-August 2 in most areas, and several days later in the central and northern districts. Egg deposition is intensifying at this time. Corn fields should start showing evidence of this insect in the week ahead.

European corn borer larvae are pupating throughout the southern and central areas of the state. The first summer moths are likely to emerge soon at locations where 1,400 degree days are surpassed. Black light traps could register the first moths of the season by July 26, although it will be several more weeks before substantial flights occur.

# APPLE INSECT & BLACK LIGHT TRAP COUNTS JULY 17 - 23

COUNTY	DATE	SITE	STLM <sup>1</sup>	RBLR <sup>2</sup>	CM <sup>3</sup>	OBLR <sup>4</sup>	OBLR <sup>5</sup>	AM RED <sup>6</sup>	AM YELLOW <sup>7</sup>
Bayfield	7/17-7/23	Keystone	115	60	1	10	—	0	0
Bayfield	7/17-7/23	Bayfield Apple	186	—	3	6	—	—	—
Bayfield	7/17-7/23	Erickson's	400	0	2	12	—	—	—
Bayfield	7/13-7/20	Oriente	48	0	0	17	—	—	—
Brown	7/17-7/23	Oneida	375	35	6	4	—	0	0
Chippewa	7/17-7/23	Chippewa Falls 1	—	0.2	0.4	0.3	0	0	0
Chippewa	7/17-7/23	Chippewa Falls 2	1	2	2	—	—	0	0
Dane	7/17-7/23	Deerfield	104	52	1	0	—	1	0
Dane	7/17-7/23	Stoughton	147	41	1	3	—	1	4
Dane	7/17-7/23	West Madison	78	30	1	0	—	0	0
Dodge	7/17-7/23	Brownsville	8	15	0.5	1	—	0	0
Fond du Lac	7/17-7/23	Campbellsport	250	45	0	7	—	0	0
Fond du Lac	7/17-7/23	Malone	480	16	2	5	—	—	—
Fond du Lac	7/16-7/23	Rosendale	163	12	2	1	—	0	0
Grant	7/17-7/23	Sinsinawa	69	6	0	0	0	0	0
Green	7/17-7/23	Brodhead	6	28	3	1	1	0	0
Iowa	7/17-7/23	Dodgeville	—	—	—	—	—	—	—
Iowa	7/17-7/23	Mineral Point	250	47	0	0	0	*2	0
Jackson	7/17-7/23	Hixton	26	1	0	6	2	0	0
Kenosha	7/17-7/23	Burlington	—	—	—	—	—	—	—
Marinette	7/17-7/23	Niagara	117	16	3	11	—	—	—
Marquette	7/17-7/23	Montello	504	0	0	0	—	0	0
Ozaukee	7/16-7/22	Mequon	350	9	2	0	—	**12 *1	—
Pierce	7/17-7/23	Beldenville	80	14	8	12	0	0	2
Pierce	7/16-7/23	Spring Valley	668	65	0	1	0	0.5	0
Racine	7/17-7/23	Raymond	486	17	2	4	—	0	0
Racine	7/16-7/23	Rochester	1060	15	6	1	—	2	0
Richland	7/17-7/23	Hillpoint	220	55	1	2	—	3	0
Sheboygan	7/17-7/23	Plymouth	350	72	0	0	—	**7	0
Walworth	7/17-7/23	East Troy	—	5	1	2	—	0	0
Walworth	7/17-7/23	Elkhorn	100	5	0	4	—	0	0
Waukesha	7/17-7/23	New Berlin	297	5	6	0	—	0	0

<sup>1</sup>Spotted tentiform leafminer; <sup>2</sup>Redbanded leafroller; <sup>3</sup>Codling moth; <sup>4</sup>Obliquebanded leafroller EASTERN; <sup>5</sup>Oblique-banded leafroller WESTERN; <sup>6</sup>Apple maggot red ball; \*Unbaited red ball; \*\*Baited red ball; <sup>7</sup>Apple maggot yellow board.

COUNTY	DATE	SITE	ECB <sup>1</sup>	TA <sup>2</sup>	BCW <sup>3</sup>	SCW <sup>4</sup>	DCW <sup>5</sup>	CE <sup>6</sup>	CEL <sup>7</sup>	WBC <sup>8</sup>	FORL <sup>9</sup>	VCW <sup>10</sup>
Chippewa	7/17-7/22	Chipp Falls	2	0	0	0	0	0	0	0	0	0
Columbia	7/17-7/23	Arlington	0	4	0	0	0	0	3	50	2	1
Dane	7/16-7/23	Mazomanie	3	5	0	0	0	0	0	25	1	0
Grant	7/17-7/23	Lancaster	0	1	0	0	0	0	0	1	0	0
Manitowoc	7/17-7/23	Manitowoc	0	4	2	3	0	0	0	3	28	0
Marathon	7/18-7/23	Wausau	4	2	1	9	2	1	0	25	6	0
Monroe	7/17-7/23	Sparta	0	0	0	0	0	0	0	165	1	0
Rock	7/17-7/23	Janesville	0	9	0	0	0	0	2	0	3	0
Walworth	7/17-7/23	East Troy	0	0	0	0	0	0	0	15	8	0
Wood	7/16-7/23	Marshfield	10	4	0	3	2	2	3	29	5	7

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