

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

High pressure dominated the Great Lakes region at the start of the week, providing very warm, humid conditions, with high temperatures in the lower 90s. Showers and thunderstorms developed on Tuesday afternoon in northern Wisconsin as a strong cold front moved south through the state, but the storms diminished by Wednesday and dry, quiet weather returned. While many areas are still saturated from heavy rainfall earlier this month, some locations in far southern Wisconsin were missed by the record rain events and are now fairly dry. Rainfall amounts in July have varied considerably. Beloit and Monroe received less than 0.5 inch as of July 29, while Madison reported 7.9 inches. Summer field crops not damaged by hail, torrential rain, or frequent severe storms of the past eight weeks have flourished under the warm, wet weather regime and are entering the late reproductive growth stages.

LOOKING AHEAD

WESTERN BEAN CUTWORM: Moths remain numerous and oviposition is heavy at some sites. The threat to late-planted corn and dry beans is still considered moderate in the central and south-central counties. The Wisconsin network of 140 pheromone traps has registered a cumulative total of 9,634 moths as of July 29, by far the largest

annual flight since the trapping program began five years ago. Based on the latest activity, growers may anticipate more larvae appearing in fields over the next 2-3 weeks.

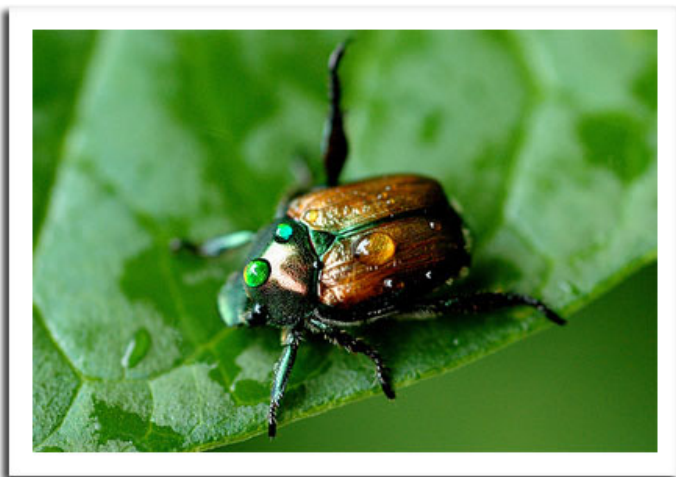
CORN EARWORM: Several migrants have been captured in pheromone traps in Chippewa and Dane counties. The significant flight is expected soon at advanced sites. Monitoring network participants should begin checking traps frequently and replacing lures on a weekly basis throughout August. Counts this week were as follows: Chippewa Falls 7, Coon Valley 0, Janesville 0, Madison 6, Marshall 9, Marshfield 0, Stoughton 20, and Sun Prairie 48.

CORN ROOTWORM: Numbers have been on the increase since emergence began earlier this month. Surveys this week found counts of 0.1-3.5 beetles per plant, with the highest populations observed in corn near Morrisonville in Dane County. Peak beetle emergence remains approximately two weeks away.

EUROPEAN CORN BORER: The phenology model for this insect suggests the peak in summer moth activity has occurred in the southern and central areas of the state, where 1,733 degree days were surpassed this week. Susceptible corn fields should be closely inspected for eggs and small larvae before 2,100 degree days (base 50°F) accumulate to determine the need for control of second generation borers. Nightly temperatures have

been very favorable for oviposition, which is expected to continue through early August.

JAPANESE BEETLE: Reports indicate beetles are still very abundant in orchards, yards and nurseries, while recent surveys in field crops have found high numbers in Dane, Eau Claire, Monroe, Richland and Sauk counties. The problem is unlikely to subside for a few more weeks, possibly until mid-August.



Japanese beetle

Carnival of Light flickr.com

FORAGES

POTATO LEAFHOPPER: Nymph production has intensified. Many fields in the south-central and southwest counties now have averages of 0.9-3.2 leafhoppers per sweep in areas where 0.1-1.7 per sweep were noted during the previous week. Counts in the southeast are lower and range from 0.1-0.6 per sweep. The very warm weather of late July has favored their increase and high populations may develop in the third and fourth crops if similar conditions prevail in August.

TRUE ARMYWORM: Alfalfa surveyed in the southern and central counties showed low populations of small (1/4-1/2 inch), early-stage larvae. Numbers ranged from 1-5 per 10 sweeps. The principal threat from true armyworms in alfalfa is when larvae migrate to other crops as fields are harvested.

ALFALFA CATERPILLAR: This insect continues to be fairly numerous in alfalfa. Counts vary substantially from field to field, but the average is about 3.5 per 10 sweeps. As noted last week, the adults are also very abundant in the southern half of the state, so an increase in larval

DEGREE DAYS JANUARY 1 - JULY 29

LOCATION	50°F	2009	NORM	48°F	40°F
Dubuque, IA	1988	1476	—	1994	3186
Lone Rock	1939	1417	—	1956	3105
Beloit	2087	1469	—	2045	3293
Madison	1922	1403	1690	1947	3080
Sullivan	1974	1437	1738	1918	3136
Juneau	1890	1403	—	1915	3032
Waukesha	1795	1442	—	1835	2918
Hartford	1759	1396	—	1828	2884
Racine	1748	1376	—	1809	2871
Milwaukee	1698	1351	1523	1777	2810
Appleton	1737	1282	1555	1830	2863
Green Bay	1598	1177	1497	1728	2705
Big Flats	1758	1282	—	1768	2861
Hancock	1783	1304	1672	1791	2890
Port Edwards	1711	1243	1591	1763	2816
La Crosse	1931	1436	1830	1913	3098
Eau Claire	1761	1357	1647	1803	2894
Cumberland	1588	1207	1563	1623	2669
Bayfield	1259	909	1196	1315	2260
Wausau	1569	1105	1508	1647	2648
Medford	1564	1121	1362	1649	2648
Crivitz	1518	1085	—	1607	2595
Crandon	1414	988	1230	1465	2441

Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2010. NORMALS based on 30-year average daily temps, 1971-2001.

numbers and feeding injury should be anticipated early next month. Damage is most severe when oviposition occurs in recently cut fields and the resulting larvae defoliate the regrowth.

PLANT BUG: A typical net sweep in alfalfa in the southern half of the state presently yields about 2.1 adults and nymphs. An average such as this one is considered non-economic relative to the threshold of 5.0 per sweep, but populations have increased markedly since mid-July.

PEA APHID: A minor increase in numbers has been noted since the last report. The highest counts were observed in Dane and Ozaukee counties, where surveys found 3-9 per sweep.

CORN

EUROPEAN CORN BORER: Surveys conducted in Monroe, Richland, Sauk and Vernon counties found light

infestations of 2-12%, with the highest population noted in the Cashton area of Monroe County. Neither late-instar larvae nor evidence of their feeding could be detected in 15 of 19 (80%) fields examined. The treatment window remains open for 1-2 more weeks in the southern and central counties, or until 2,100 degree days (base 50°F) have been surpassed.

WESTERN BEAN CUTWORM: The annual flight has peaked and is now declining. Black light and pheromone trap counts have begun to decrease in areas where the degree day standard is well past 1,526 (base 50°F), the point at which 75% emergence is expected. The high count for the week of July 23-29 was 177 moths, once again registered near Neshkoro in Waushara County. Refer to the **PESTWATCH** website at <http://www.pestwatch.psu.edu/sweetcorn/tool/tool.html> for counts at all 140 Wisconsin monitoring locations.



Western bean cutworm larva

Krista Hamilton DATCP

CORN LEAF APHID: Populations are variable, but many fields in the southern and west-central counties have densities of 30-150 aphids per plant on 10-20% of the plants. Colonies of 50 or more aphids per plant on 50% of the plants during the late whorl-pollen shed stage may interfere with pollination and should be treated promptly.

TRUE ARMYWORM: Larval populations are increasing in alfalfa and corn. Regular inspection of susceptible crops should be underway.

JAPANESE BEETLE: Significant infestations of beetles were observed this week in scattered corn fields in the south-central area. In Dane County, 5-10% of the plants in one field had silks pruned to the ear tip and as many as 7 beetles were feeding on the silks, thus impairing

pollination. Control is warranted if populations exceed 3 beetles per ear and pollination is incomplete.

SOYBEANS

PHYTOPHTHORA ROOT ROT: A statewide survey for early-season soybean root rot disease found *Phytophthora sojae* in 15 of 45 fields sampled. From June 16 to July 9, seedling roots were collected from low-lying areas of soybean fields and diagnosed at the Plant Industry Laboratory using molecular testing methods. At the time of testing, the seedlings did not display any significant foliar symptoms or damping-off, but the fine roots showed signs of decay. The 33% incidence of Phytophthora root rot this year represents a marked increase from 18% in 2009 and 20% in 2008. Detailed soybean disease survey reports are available at <http://pestsurvey.wi.gov/plantdisease/soybean.html>.

GREEN CLOVERWORM: As previously noted, these caterpillars are particularly numerous this year. A UW-Extension Agent's report indicates the worms are causing severe damage to soybeans in parts of Rock County and control treatments were initiated late last week. Most fields currently have light-moderate defoliation and non-economic populations of less than 1-2 larvae per foot.



Green cloverworm

Krista Hamilton DATCP

SOYBEAN APHID: The annual survey is partly complete and preliminary results show very low populations throughout the state. Less than 2% of the 170 fields examined from June 29-July 23 had densities of 26-88 aphids per plant, 67% had 1-25 per plant, and 31% had no apparent population. Only two surveyed fields, one in Green

County and another in Jefferson County, had average densities above 50 aphids per plant. A follow-up evaluation is planned for the next three weeks to determine the rate of aphid increase and the need for control. Economic populations of 250 or more aphids per plant have not been observed in any field checked by DATCP pest survey specialists this season.

JAPANESE BEETLE: Defoliation has increased in soybeans and other field crops. Beetles were observed in 9 of 15 fields examined in Monroe, Richland and Sauk counties this week, and defoliation ranged from 2-18% fieldwide. Circumstances thus far have not justified treatment, but defoliation levels are approaching the 20% economic threshold for R1-R5 soybeans.

VEGETABLES

LATE BLIGHT: This disease was detected in three new locations since the last report and now infects potatoes in Marquette and Portage counties, and tomatoes in Kewaunee, Monroe and Waukesha counties.

BACTERIAL WILT: Many home gardens in Dane, Grant, Richland and Vernon counties are reported to have wilting and dying cucumber plants, typical symptoms of bacterial wilt. This disease is transmitted by the striped cucumber beetle. The most effective control is prompt elimination of the beetles.



Striped cucumber beetle

Mark Jankura flickr.com

FRUITS

APPLE MAGGOT: Emergence presumably has peaked in all but the far northern counties. Economic counts of 1 fly

per **UNBAITED** trap per week or 5 flies per **BAITED** trap were documented at 9 of 20 orchards from July 23-29, with a high count of 32 flies per baited red ball trap at Plymouth in Sheboygan County. Fly activity can be expected throughout August, so growers should continue to reapply tangle-trap to red spheres and consider setting additional traps for fly control in problem areas.

CODLING MOTH: Most orchards are 250 or more degree days beyond the second biofix and treatments for control of second generation larvae have begun. Orchards that register higher counts of second flight moths relative to the first flight probably have some degree of fruit injury and should be closely inspected for damage. First generation larvae have pupated by now and only their feeding damage will be evident. Apple growers are reminded to rotate insecticides between generations to prevent resistance development.

POTATO LEAFHOPPER: The high nymph-adult ratio in alfalfa sweep net collections indicates reproduction has intensified. As more alfalfa acreage is harvested next week, it is recommended that growers scout non-bearing orchard blocks for leafhopper nymphs on the undersides of apple leaves. Counts of only 1-2 nymphs per leaf can cause severe yellowing and leaf curling.

SAN JOSE SCALE: For many Wisconsin apple orchards, San Jose scale is a relatively new pest and the period of crawler activity has not been well established. Continued taping of scaffold branches is advised to determine the duration of this life stage, which may extend for six weeks in some locations.

CRANBERRY REPORT: Despite the extreme heat and rainfall events of the past several weeks, fruit set generally appears good. Many bogs have required irrigation cooling to reduce mid-day heat stress and fruit rot potential. Populations of the Sparganothis and cranberry fruitworm species have been kept below established thresholds by effective insect control measures. Degree day accumulations as of July 29 remain about 15% ahead of normal for this time of year.

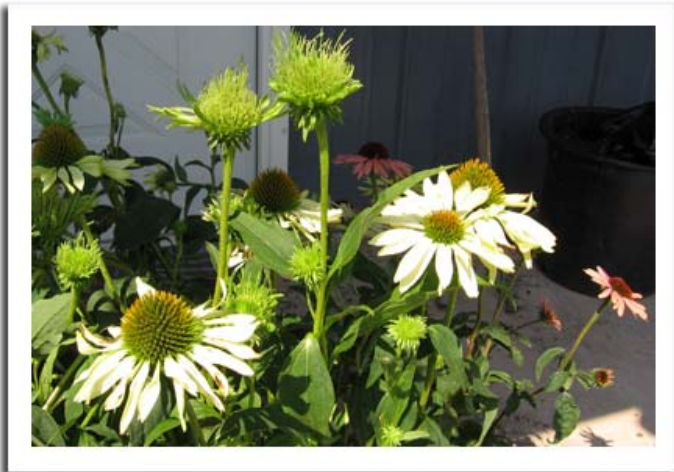
FOREST

GYPSY MOTH: Aerial surveys conducted by the Wisconsin DNR found 346,749 acres of defoliation this season, an unprecedented increase from 3,620 acres in 2009 and

well above the previous record of 65,000 acres set in 2006. Areas of defoliation were observed in Brown, Columbia, Dane, Juneau, Marinette, Menominee, Oconto, Rock, Sauk, Shawano and Waupaca counties, with the most extensive damage noted in Oconto County. The vast majority of the defoliation was rated as moderate.

NURSERY & LANDSCAPE

ASTER YELLOWS: This leafhopper-transmitted disease was found on Echinacea 'Pink Poodle' and 'Double Delight' at several nurseries in Polk County. Symptoms of infection include abnormal flowers, irregular stem growth, and green, stunted ray and disk petals. The aster yellows phytoplasma persists in both wild and cultivated coneflowers and other perennial or biennial hosts over the winter months, thus infected plants may act as reservoirs next spring. Removal and destruction of symptomatic plants is the recommended control method.



Echinacea with aster yellows

Konnie Jerabek DATCP

ZIMMERMAN PINE MOTH: Light damage to Austrian pines was observed in Outagamie County. Infested trees showed the distinctive pitch masses associated with larval feeding. Pupation is likely to occur in the next week, with the first appearance of adults expected in August. Pitch masses that develop on branches should be pruned and destroyed before the adults emerge next month. Insecticides are also effective against the larvae if applied to the trunks of trees from early April to May.

PEONY RED SPOT: Peonies at a nursery in Dodge County were infected with this fungal disease, characterized by small, circular, red or purplish leaf spots that

appear on the upper surfaces of young leaves shortly before bloom. Later in the season the lesions expand and merge to form large, irregular, blighted areas. All above-ground parts of the peony are susceptible. This disease can be controlled by cutting all foliage to ground level in fall and destroying infected debris. Fungicides are effective in reducing the incidence of red spot and should be applied to the soil around plants in spring, when new shoots are 2-4 inches high. A second post-emergence application may be necessary.



Red spot on peony leaves

Liz Meils DATCP

TRAPPING NETWORKS

BLACK LIGHT TRAPS: Black light traps registered few specimens during the period of July 23-29. Western bean cutworm moths appeared in low-moderate numbers at most locations, the second flight of corn borers continued at low levels, and true armyworms were reported from Arlington, Chippewa Falls, Coon Valley and Marshfield. The peak of summer European corn borer moth activity, an event projected for 1,733 degree days (base 50°F), has occurred in the southern and central counties.

APPLE INSECT & BLACK LIGHT TRAP COUNTS JULY 23 - 29

COUNTY	DATE	SITE	STLM ¹	RBLR ²	CM ³	OBLR ⁴	OBLR ⁵	AM RED ⁶	AM YELLOW ⁷
Bayfield	7/23-7/29	Keystone	40	34	1	4	—	*30	*11
Bayfield	7/23-7/29	Bayfield	—	—	—	—	—	—	—
Bayfield	7/19-7/26	Oriente	46	0	0	3	—	0	0
Brown	7/23-7/29	Oneida	675	11	12	5	—	*2	0
Chippewa	7/23-7/29	Chippewa Falls 1	0	19	12	0	0	*5	0
Chippewa	7/23-7/29	Chippewa Falls 2	—	—	—	—	—	—	—
Dane	7/22-7/28	Deerfield	1137	14	12	1	—	*2	0
Dane	7/23-7/29	McFarland	—	—	—	—	—	—	—
Dane	7/22-7/28	Stoughton	274	51	8	2	—	*2	*4
Dane	7/23-7/29	West Madison	85	45	11	7	—	0	0
Dodge	7/23-7/29	Brownsville	—	—	—	—	—	—	—
Fond du Lac	7/23-7/28	Campbellsport	100	15	0	0	—	0	0
Fond du Lac	7/23-7/29	Malone	480	18	6	6	—	0	0
Fond du Lac	7/21-7/29	Rosendale	239	96	2	0	—	*2	*1
Grant	7/23-7/29	Sinsinawa	—	—	—	—	—	—	—
Green	7/23-7/29	Brodhead	—	—	—	—	—	—	—
Iowa	7/23-7/29	Dodgeville	675	15	35	2	0	0	0
Iowa	7/23-7/29	Mineral Point	221	118	13	6	0	0	0
Jackson	7/23-7/29	Hixton	—	—	—	—	—	—	—
Kenosha	7/23-7/29	Burlington	100	3.5	12	2	—	*6	0
Marinette	7/23-7/29	Niagara	—	—	—	—	—	—	—
Marquette	7/18-7/25	Montello	252	0	4	0	—	0	0
Ozaukee	7/23-7/29	Mequon	—	—	—	—	—	—	—
Pierce	7/23-7/29	Beldenville	93	0	3	0	0	*2	0
Pierce	7/22-7/29	Spring Valley	92	33	2.5	1	0	**2.25	1
Racine	7/23-7/29	Raymond	368	21	2	10	—	0	0
Racine	7/23-7/29	Rochester	110	21	16	4	—	*9	*4
Richland	7/20-7/27	Hillpoint	550	3	1	1	0	**1	*0
Sheboygan	7/23-7/29	Plymouth	117	26	10	0	—	**32	0
Walworth	7/23-7/29	East Troy	—	—	—	—	—	—	—
Walworth	7/23-7/29	Elkhorn	—	—	—	—	—	—	—
Waukesha	7/23-7/29	New Berlin	720	18	13	12	—	0	0

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

COUNTY	DATE	SITE	ECB ¹	TA ²	BCW ³	SCW ⁴	DCW ⁵	CE ⁶	CEL ⁷	WBC ⁸	FORL ⁹	VCW ¹⁰
Chippewa	7/23-7/29	Chipp Falls	10	1	0	0	10	0	0	4	0	0
Columbia	7/23-7/29	Arlington	0	1	0	0	0	0	1	7	0	1
Grant	7/23-7/29	Lancaster	3	0	0	0	0	0	0	1	0	0
Manitowoc	7/23-7/29	Manitowoc	—	—	—	—	—	—	—	—	—	—
Marathon	7/23-7/29	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	7/23-7/28	Sparta	0	0	2	0	0	0	0	43	0	0
Rock	7/23-7/29	Janesville	19	0	1	0	0	0	5	0	2	0
Walworth	7/23-7/29	East Troy	0	0	0	0	2	0	1	13	0	0
Wood	7/22-7/29	Marshfield	13	27	3	1	3	0	6	12	4	2
Vernon	7/26-7/29	Coon Valley	6	15	5	0	6	0	2	10	0	3

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