

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

Sunny and warm weather prevailed for much of the week across the state. A passing low pressure system generated widespread, locally heavy rain over southern Wisconsin on Sunday, benefiting late-filling soybeans and alfalfa. The heaviest amounts (1.0-1.5 inches) fell across the southwestern counties, with 1.5 inches recorded at Lone Rock in Richland County. Temperatures increased throughout the week to reach the high 90s by Thursday. Meanwhile, late-summer fieldwork, including harvesting of apples, corn for silage, potatoes and fourth crop alfalfa, accelerated well ahead of average. Many of Wisconsin's apple growers are preparing for one of the most disappointing harvests in recent memory due to last spring's early bloom and freeze events followed by drought and damaging storms. Apple production in the state is expected to decline by 61% to 20 million pounds in 2012. Average yields for other crops are also projected to be down significantly after this summer's historic drought.

LOOKING AHEAD

CORN EARWORM: Counts in pheromone traps during the last month have been substantial, with reports of 200 or more moths per trap from locations in Dane and Fond du Lac counties. Larvae in all stages of development are

present in low numbers in corn across much of the state. A surge in moth counts at Ripon from 202-229 last week to 651-1,092 this week should ensure that larval populations persist well into September.

WESTERN BEAN CUTWORM: According to the 2012 trapping program results, the moth flight peaked 2-3 weeks earlier and was slightly smaller than that of 2011. The average number of moths per trap was 25, a minor decrease from 28 per trap last year. The cumulative state count of 3,290 moths as of August 30 compares to 4,895 moths in 2011, 10,807 moths in 2010 and 4,928 moths in 2009. Infestations resulting from the flight have been minimal this season. Many larvae are fully developed and have entered the pre-pupal overwintering stage.

EUROPEAN CORN BORER: A count of 22 moths was registered in the Coon Valley black light trap from August 23-29. These individuals signify the beginning of a third flight, an uncommon occurrence in Wisconsin. Egg deposition and hatch are in progress in the southern and central areas, but it is questionable if the resulting third generation of larvae will mature enough to overwinter.

SPOTTED WING DROSOPHILA: Three infestations have been confirmed in Monroe and Vernon counties, near Cashton, Readstown and Viroqua. Numerous larvae were collected from blackberries, raspberries and strawberries, and flies are also being captured in vinegar

traps. Many additional cases in Calumet, Monroe, Pierce and Vernon County berry farms are suspected but remain unverified. Based on the potential for direct damage to berries (one or more maggots per berry), late-ripening small fruits should be checked frequently for the white, cylindrical maggots as the harvest season continues.



Spotted wing drosophila flies

HJB ncsmallfruitsipm.blogspot.com

LATE BLIGHT: Continued development on tomato and potato is reported in Marathon and Waushara counties. Protective treatments of green vines with a late blight-specific fungicide on a 5- to 7-day schedule should be maintained. Potato tubers remain susceptible to infection even when very little foliage is present.

FORAGES

POTATO LEAFHOPPER: Surveys conducted in Columbia, Dane, Green Lake, Marquette, Richland and Sauk counties during the final week of August found variable, mostly non-economic populations. Counts were below 2.9 per sweep in all fields sampled and the average was 0.7 per sweep. Nymph counts have declined and significant population increases are not expected for the remainder of the growing season.

PEA APHID: Densities have escalated in localized fields. One alfalfa field surveyed in Dane County and two in Richland County contained 10-21 per sweep, the highest populations documented in several weeks. Other sites had fewer than seven per sweep. Pea aphids have been of minor importance this year.

GRASSHOPPER: This pest remains abundant in the grassy areas adjacent to alfalfa, but minimal feeding

DEGREE DAYS JANUARY 1 - AUG 29

LOCATION	50°F	2011	NORM	48°F	40°F
Dubuque, IA	2830	2508	2386	2559	4499
Lone Rock	2770	2409	—	2471	4394
Beloit	2921	2538	2426	2552	4616
Madison	2795	2354	2311	2468	4436
Sullivan	2768	2342	2298	2456	4407
Juneau	2683	2266	—	2402	4275
Waukesha	2550	2108	—	2327	4100
Hartford	2529	2110	—	2326	4071
Racine	2548	2055	—	2395	4087
Milwaukee	2502	2039	2230	2349	4034
Appleton	2508	2071	2236	2377	4030
Green Bay	2413	1964	2079	2333	3906
Big Flats	2510	2085	—	2240	4024
Hancock	2537	2123	2241	2247	4078
Port Edwards	2458	2063	2197	2265	3954
La Crosse	2740	2369	2524	2474	4346
Eau Claire	2539	2166	2277	2377	4067
Cumberland	2212	1934	2136	2203	3647
Bayfield	1887	1592	—	1966	3184
Wausau	2230	1892	2091	2163	3648
Medford	2222	1908	1916	2225	3644
Crivitz	2227	1854	—	2205	3661
Crandon	1979	1719	1624	1982	3315

Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2012.
NORMALS based on 30-year average daily temps, 1981-2010.

injury is evident beyond the field margins. Alfalfa fields with counts in excess of 3-4 per sweep are unusual in the southern half of the state.

CORN

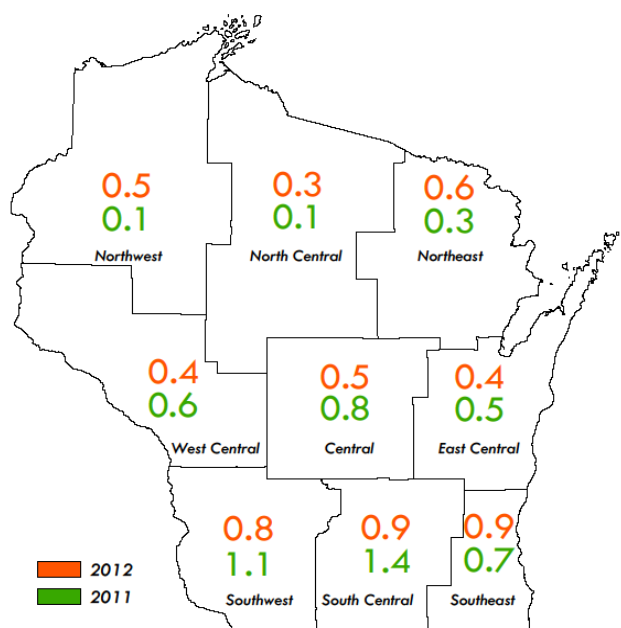
CORN EARWORM: Moths appeared in very high numbers in pheromone trap collections again this week. Counts at the Dane and Fond du Lac County monitoring sites were particularly high and ranged from 125-1,092 per trap. The latest activity signals that the threat to late sweet corn plantings has intensified. Pheromone trap counts for the August 23-29 reporting period were as follows: Bloomington 87, Columbus 125, Coon Valley 20, Janesville 25, Marshfield 1, Ripon^a 651, Ripon^b 1,092 and Wausau 0.

CORN ROOTWORM: The beetle survey conducted from July 20-August 17 found relatively high counts in corn across the southern three crop reporting districts and low

to moderate populations elsewhere. District averages ranged from 0.8-0.9 beetle per plant across the south, where 33 of 98 (34%) fields sampled had economic populations of 0.75 or more per plant. Beetle counts decreased in central Wisconsin and increased in the north. District averages in these areas varied from 0.3-0.6 per plant (see map).

Based on the results of the annual survey, non-Bt, continuous corn in the south is at increased risk of root damage as overwintered larvae hatch next season. However, individual fields with economic counts were found in all areas and these sites are also at risk if replanted to non-Bt corn in 2013.

Average Number of Corn Rootworm Beetles per Plant



Wisconsin Department of Agriculture, Trade and Consumer Protection



EUROPEAN CORN BORER: A third flight is in progress in the southern, central and western areas. This flight may result in a higher population of overwintering larvae and a larger emergence of moths next spring. The larval abundance survey in September should reveal any significant change in the fall corn borer population.

CORN WILT DISEASES: The incidence of Goss's wilt in Wisconsin seed corn fields decreased significantly in 2012. After two consecutive years of elevated disease rates, only three of 57 (5%) corn leaf samples tested positive this season. Disease incidences were 34% and 62%, respectively, in 2011 and 2010. The hot, dry

weather of July appears to have reduced its occurrence, while in the preceding two years, heavy precipitation, frequent storms and extensive wind damage favored its development. Corn leaf samples were also tested for other diseases of export significance, including Stewart's wilt and wheat streak mosaic virus (WSMV). Results for both diseases were negative.

SOYBEANS

SOYBEAN APHID: The annual survey documented the lowest densities in the history of soybean aphid in Wisconsin. Examination of 161 soybean fields once in July and again in August found an exceptionally low state average of only three aphids per plant during the July portion of the survey and a count of seven per plant this month. The previous lowest state average was 11 aphids per plant in 2004. Probable explanations for the scarcity of aphids this year include intense heat and extensive chemical treatment of fields for two-spotted spider mites, which also reduced aphid numbers.



Soybean aphids

Krista Hamilton DATCP

WHITEFLIES: Populations remain unusually high in west-central fields. Counts of 5-53 per leaf were noted in the Alma area of Buffalo County and at a few sites in Monroe and Trempealeau counties. This common pest of greenhouse plants and commercial vegetables has been abundant in western Wisconsin soybeans this summer. Levels elsewhere in the state generally have been low.

GREEN CLOVERWORM: Larval counts have increased to moderate levels in a small number of fields since early August, but are low in most areas. Many soybean fields are beyond the point where yield loss is likely.

JAPANESE BEETLE: Adults continue to be active and fairly common in soybeans. Defoliation has not exceeded economic thresholds and control has been unjustified for most fields this season. The heaviest infestations of the year in soybeans were noted in Chippewa and Eau Claire counties earlier this month.



Japanese beetle feeding on soybean leaf

Krista Hamilton DATCP

FRUITS

SPOTTED WING DROSOPHILA: Larvae are infesting blackberries and raspberries in southwestern and west-central Wisconsin, and potentially many other areas of the state. Berry growers are advised to randomly sample late-ripening varieties and plantings and contact DATCP at 1-866-440-7523 if white maggots are found. Canes with infested fruits should be removed with the fruit attached to prevent spotted wing drosophila from multiplying on the unharvested berries. Overripe and fallen fruits are highly attractive to the adult flies and also should be discarded.

APPLE MAGGOT: Fly activity has decreased in most areas but enough adults are still present to cause problems in late varieties. Counts varied from 1-9 per trap for the period of August 23-29, with the weekly high count registered in Bayfield County.

JAPANESE BEETLE: Reports of continued feeding in raspberry plantings were received in the past week. The cooperator near Chippewa Falls noted that beetle numbers are not alarming, but several of his customers have commented on their presence. Levels in orchards currently vary by region of the state and the effectiveness of the control measures applied earlier this month.

CODLING MOTH: Counts have declined to the lowest levels of the season at most sites. The weekly average based on reports from 22 orchards was less than four moths per trap, although an exceptional count of 25 moths was recorded at Mineral Point in Iowa County. The Iowa County moths may be representatives of a third flight. Growing degree day accumulations are adequate for a third flight and partial third generation of larvae this year. Larvae from late-season flights usually do not complete development before winter conditions arrive or the fruit is harvested.

OBLIQUEBANDED LEAFROLLER: Orchardists are reminded to monitor pheromone traps for this insect and the Oriental fruit moth regularly throughout September, long after spraying is discontinued. Second generation larvae occasionally cause significant fruit damage late in the growing season.

VEGETABLES

SQUASH BUG: Growers of melons, pumpkins and squash should continue to inspect plants for squash bugs as fruits ripen next month. Most plantings have matured beyond the critical period of control (seedling and flowering stages), but the adults and nymphs are likely to feed on fruits throughout fall, causing aesthetic damage and in extreme cases, fruit drop. Late-season control consists of disposing of cucurbit foliage and plant debris around the garden to reduce the number of overwintering sites.



Squash bug nymphs

www.gardensimply.com

TOMATO FRUITWORM: Tomatoes are at increased risk of egg deposition and larval infestation by this pest now that most of the state's sweet corn fields are well beyond

the green silk stage and no longer provide attractive egg laying sites. The female moths lay eggs near green fruits and the larvae rapidly enter tomatoes from the stem end, consuming the interior and leaving a cavity filled with fluid and droppings. Fruits are inedible after fruitworm infestation and should be removed and discarded.

IMPORTED CABBAGEWORM: A Dane County gardener reports that imported cabbageworm butterflies have been common since May, although the larvae are scarce. Plausible reasons for their absence are that intense heat desiccated eggs and small larvae, the plants were too dry and the larvae failed to establish, or parasitic wasps regulated much of the population. Braconid wasps appear to have been influential in controlling the larvae.



Imported cabbageworm butterfly

[papierdreams flickr.com](http://papierdreams.flickr.com)

LATE BLIGHT: Environmental conditions remain favorable for late blight development. Monitoring plants for signs of infection and regular treatment of infected fields on a 5-7 day schedule will be critical for preventing this disease from spreading to other tomato and potato crops as harvest continues. Confirmed cases of late blight have been identified in Adams, Barron, Marathon, Oneida, Portage, Rusk, Sheboygan and Waushara counties to date.

ONION MAGGOT: Third-generation maggots are feeding on cull onions and bulbs left behind in fields. Onion growers should remove all cull piles and thoroughly clean fields to reduce overwintering populations. Rotation to a non-host crop is recommended for fields with a history of onion maggot problems.

JAPANESE BEETLE: Low to moderate populations persist in home gardens, orchards and field crops. Adults were concentrated on basil in a home garden and were noted

on wild buckwheat in Dane County earlier this week. By most accounts, Japanese beetles have been less of a problem this year than last.

WEEDS

WINTER ANNUAL WEEDS: Control of winter annuals in fall offers several benefits, including fewer weed problems at planting and improved efficacy of spring herbicide treatments. Winter annuals such as common chickweed, yellow rocket, shepherd's purse and henbit emerge in fall, overwinter as low rosettes, and set seed in spring. Serious infestations have grown increasingly common in Wisconsin and the Midwest because the popular no-till/Roundup Ready® cropping system fails to target most winter annual plants prior to seed set. Although winter annuals usually do not compete directly with corn and soybean growth, they can interfere with spring planting and tillage, and may attract early-season pests like the black cutworm. Optimal timing of herbicide application for control of emerged winter annuals is mid-October to mid-November.



Yellow rocket

[Krista Hamilton DATCP](http://kristahamilton.datcp.com)

NURSERY & FOREST

ZIMMERMAN PINE MOTH: Light damage to Austrian pines was observed in Jefferson County. Infested trees showed the distinctive pitch masses associated with larval feeding. Pupation has occurred in recent weeks, and the adults are emerging and laying eggs. The resulting larvae will hatch by mid-September and overwinter in bark cracks. Their characteristic pitch masses appear in spring with the onset of larval feeding. Pitch masses that

develop on branches should be pruned and destroyed before the adults emerge next August. Insecticides are also effective against the larvae if applied to the trunks of trees by mid-September and again from early April-May.



Zimmerman pine moth pitch mass

hyg.ipm.illinois.edu

PEAR SAWFLY: Serviceberry shrubs in Dodge and Washington counties were noted to have been lightly defoliated by the larvae of this insect. The black, slug-like larvae feed on the upper leaf surface, skeletonizing the leaves. Larvae first appear in June, feed for a month then drop to the soil to pupate. A second generation appears in August. Several control options are available including manual removal, horticultural oils and insecticidal soaps.



Pear sawfly larvae

[Lesley Ingram bugwood.org](http://LesleyIngram.bugwood.org)

OYSTERSHELL SCALE: A minor infestation of scales was found on ash trees at a nursery in Washington County. This insect infests apple, birch, cotoneaster, dogwood, elm, lilac, maple, willow and about 50 other woody plant species, in addition to ash. Horticultural oils and soaps or

conventional insecticides are effective against the first and second generations of mobile crawlers between 275-500 degree days (base 50°F) and 1,600-1,700 degree days, respectively. Treatment is not advised now that the scales have adhered to the branches and formed protective waxy coverings.

OAK WILT: Oak wilt has been confirmed for the first time in Lincoln, Sawyer and Vilas counties. The infected trees were found in three locations: north of Tomahawk, south of Hayward and east of Eagle River. In all three cases, the symptomatic trees were in yards and the residents indicated that the oaks had been pruned or damaged in late spring.



Oak wilt symptoms on oak leaves

ISU Plant Disease Clinic

This terminal fungal disease kills oaks by inhibiting movement of water and nutrients from the root system, causing the leaves to wilt and fall. Symptoms progress rapidly, usually from the upper crown downward, and trees may die within a few weeks. Trees in the red and white oak groups are susceptible, but red oaks, including northern red, northern pin, and black oaks, are particularly vulnerable.

Oak wilt is widespread throughout southern and central Wisconsin and continues to spread northward. The disease is now present in 58 of the state's 72 counties; the exceptions are Ashland, Bayfield, Calumet, Door, Douglas, Forest, Iron, Kewaunee, Manitowoc, Price, Rusk, Sheboygan, Taylor and Washburn.

APPLE INSECT & BLACK LIGHT TRAP COUNTS AUGUST 23 - 29

COUNTY	SITE	STLM ¹	RBLR ²	CM ³	OBLR ⁴	OBLR ⁵	AM RED ⁶	YELLOW ⁷	GDD 50°F
Bayfield	Keystone	27	5	3	8		9	6	
Bayfield	Oriente	244	0	0	1		0	0	
Brown	Oneida	—	—	—	—		—	—	
Chippewa	Chippewa Falls	—	4	3	0		0	0	
Columbia	Rio	—	—	0	0		0	0	
Crawford	Gays Mills	105	40	0	3		6	0	
Dane	Deerfield	54/13	29	0	—		0	0	
Dane	McFarland	—	—	—	—		2	0	
Dane	Mt. Horeb	0	16	5	0		0	0	
Dane	Stoughton	—	—	—	—		—	—	
Dane	West Madison	—	20	4	1		1	0	
Fond du Lac	Campbellsport	22	76	0	92		0	0	
Fond du Lac	Rosendale	12	2	0	0		0	2	
Grant	Sinsinawa	54	12	8	1		—	—	
Green	Brodhead	0	14	4	3		0	0	
Iowa	Mineral Point	20	25	25	1		—	—	
Jackson	Hixton	—	—	—	—		—	—	
Kenosha	Burlington	100	5	0	0		2	0	
Marathon	Edgar	—	—	—	—		—	—	
Marinette	Niagara	138	0	0	0		0	0	
Marquette	Montello	54	0	0	0		1	0	
Ozaukee	Mequon	0	20	3	0		8	—	
Pierce	Beldenville	—	—	—	—		—	—	
Pierce	Spring Valley	41	33	3	0		*1	*0	
Polk	Turtle Lake	25	0	10	6		**0	—	
Racine	Raymond	267	5	4	1		0	0	
Racine	Rochester	85	29	5	0		*2	0	
Richland	Hillpoint	—	—	—	—		—	—	
Sheboygan	Plymouth	—	—	—	—		—	—	
Waukesha	New Berlin	669	5	2	1		0	0	

¹Spotted tentiform leafminer; ²Redbanded leafroller; ³Codling moth; ⁴Obliquebanded leafroller EASTERN; ⁵Obliquebanded leafroller WESTERN; ⁶Apple maggot red ball; ^{*}Unbaited AM trap; ^{**}Baited AM trap; ⁷AM yellow board; ^{*} Three-week counts.

COUNTY	SITE	ECB ¹	TA ²	BCW ³	SCW ⁴	DCW ⁵	CE ⁶	CEL ⁷	WBC ⁸	FORL ⁹	VCW ¹⁰
Chippewa	Chippewa Falls	1	0	0	0	1	0	0	1	0	0
Columbia	Arlington	0	0	0	0	1	0	0	0	0	0
Crawford	Prairie du Chien	1	0	0	0	1	5	0	0	0	0
Dane	Mazomanie	7	0	0	0	25	19	0	1	0	0
Fond du Lac	Ripon	4	0	0	0	0	11	0	0	3	0
Marathon	Wausau	0	0	1	3	34	2	0	0	13	0
Monroe	Sparta	0	0	0	0	41	0	0	0	0	0
Rock	Janesville	2	0	0	0	3	0	0	0	0	0
Vernon	Coon Valley	22	4	0	0	19	8	0	0	3	0
Walworth	East Troy	0	1	0	0	18	0	0	0	1	0
Wood	Marshfield	0	1	0	0	11	1	1	0	3	0

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