

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

Mostly dry weather continued across Wisconsin, easing the excessive wetness from several weeks of inundating rainfall. Scattered light showers and storms occurred in the far northwest, but the rain was not heavy enough to cause significant fieldwork delays. Seasonably warm conditions accelerated harvesting of alfalfa, oats, snap beans and sweet corn. Many crops are exhibiting symptoms of earlier wet conditions, but development is remarkably advanced for this time of year. At the start of the week, 34% of the state's corn was at or beyond the dented stage, 33 percentage points ahead of last year and 21 points ahead of the 5-year average. Conditions were reported as good to excellent for 80% of the corn crop. Heat, humidity and frequent rain this summer contributed to several noteworthy pest events, including unusually high numbers of alfalfa caterpillars, earwigs and slugs and a marked increase in plant diseases.

LOOKING AHEAD

WESTERN BEAN CUTWORM: Pheromone traps at 140 sites registered a cumulative count of 10,228 moths, by far the largest flight ever documented in the state. The peak in moth emergence occurred during the two-week period from July 8-22, with a lesser flight continuing through late August. Heavy damage has been observed

in many southern and central Wisconsin corn fields in the past six weeks, and an Adams County report indicates that infestations there have been especially severe. Most of the population is advanced and should enter the pre-pupal stage early next month.

CORN ROOTWORM: The statewide beetle survey is incomplete, but populations thus far are lower than last year. Examination of corn fields in the southwest and south-central counties yielded average counts of 0.3 and 0.5 beetle per plant, a reduction from 0.7 and 1.1 per plant in 2009. In the central area, the district average remained unchanged at 0.4 beetle per plant. Economic counts of 0.75 or more beetle per plant were found in 12 of 83 (14%) surveyed fields, compared to 28% last season. Final survey results will be published in the 2010 summary issue.

SOYBEAN APHID: Densities were the lowest in six years, according to the annual survey completed this week. Eighty five percent of the 168 soybean fields sampled in August had very low counts of 0-25 aphids per plant, 8% had 51-100 per plant, and only 7% contained 101-146 per plant. Populations did not exceed economic levels this year in the majority of Wisconsin soybean fields. Results of the survey are summarized on page 98.

CORN EARWORM: The primary flight continued for the fourth week. Moth collections at the Chippewa Falls,

Coon Valley and Marshfield monitoring locations varied from 163-249 per trap, which represents a decrease from the previous week. Reflective of the prolonged flight period this month, larvae in all stages of development ($\frac{1}{8}$ - $1\frac{1}{2}$ inches) can be found in corn fields throughout the state. Egg deposition is expected to persist through early September.

FORAGES

POTATO LEAFHOPPER: Dry weather favored leafhopper activity in the past week, but counts remain much the same as reported previously. Numbers in the southwest, central and northwest counties varied from 0.2-3.7 per sweep, with an average of 1.2 per sweep. Only 4 of 21 surveyed fields had economic counts of 2.0 or more per sweep. Nymphs continue to appear in sweep nets.

PEA APHID: Populations in alfalfa declined abruptly after the first cutting in June and have remained very low in subsequent weeks. This insect has been scarce this season, probably due to prevailing wet weather facilitating the spread of fungal pathogens.

ALFALFA CATERILLAR: Alfalfa surveyed in Clark, Eau Claire, Monroe, Pierce, Sauk, St. Croix and Vernon counties contained low counts of 0.1-3.5 larvae per sweep, with an average of 0.5 per sweep. The abundance of sulfur-yellow butterflies in the state could produce a partial third generation next month.

CORN

CORN ROOTWORM: Preliminary results of the annual beetle survey show a decrease from 2009 populations in the south-central and southwest agricultural districts. Numbers in Columbia, Dane and Dodge counties varied from 0-2.2 per plant and averaged 0.5 per plant. In Adams, Green Lake, Juneau, Marquette, Portage, Waupaca and Wood counties, counts were similar and ranged from 0-2.5 beetles per plant, with an average of 0.4 per plant. Populations in the southwest counties of Grant, Iowa, Lafayette, Richland and Sauk varied from 0-2.7 per plant and averaged 0.3 per plant. Economic counts of 0.75 or more beetle per plant were found in 12 of 83 (14%) surveyed fields, compared to 28% at the same time last year. It must be emphasized that these results are preliminary and are subject to change before the survey is finalized.

DEGREE DAYS JANUARY 1 - AUG 26

LOCATION	50°F	2009	NORM	48°F	40°F
Dubuque, IA	2641	1992	—	2644	4125
Lone Rock	2587	1936	—	2588	4041
Beloit	2763	1998	—	2693	4256
Madison	2567	1926	2231	2589	4010
Sullivan	2621	1990	2279	2539	4069
Juneau	2518	1948	—	2553	3944
Waukesha	2408	2011	—	2481	3813
Hartford	2363	1958	—	2465	3771
Racine	2383	1943	—	2465	3789
Milwaukee	2313	1915	2093	2426	3707
Appleton	2349	1782	2086	2450	3759
Green Bay	2196	1656	2010	2345	3583
Big Flats	2348	1753	—	2367	3734
Hancock	2380	1778	2188	2385	3771
Port Edwards	2299	1700	2108	2360	3687
La Crosse	2589	1979	2422	2545	4046
Eau Claire	2375	1853	2190	2414	3793
Cumberland	2148	1638	2092	2213	3507
Bayfield	1732	1285	1650	1817	3007
Wausau	2117	1521	2017	2213	3474
Medford	2108	1534	1829	2212	3471
Crivitz	2089	1528	—	2209	3446
Crandon	1909	1368	1627	1986	3209

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

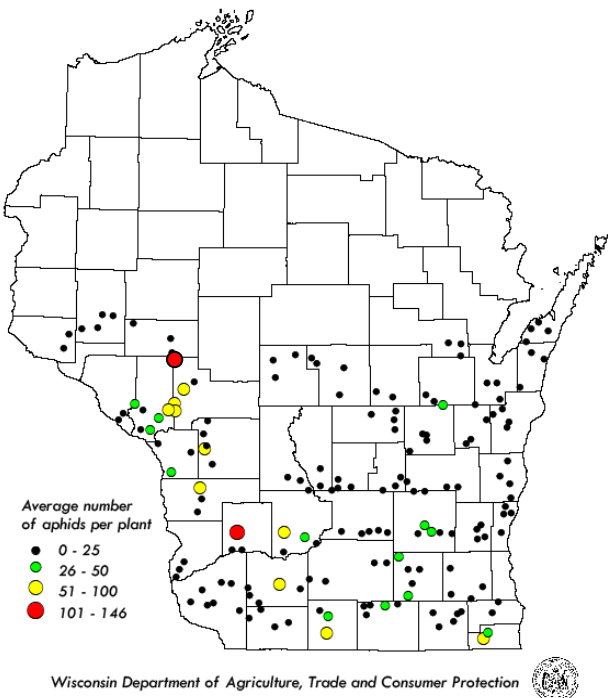
CORN EARWORM: Numbers of corn earworm moths increased at some monitoring locations and declined at others. The trap near Chippewa Falls in northwestern Wisconsin registered an increase from 226-245 moths, while Coon Valley, Janesville and Marshfield collected fewer migrants. Review of the 2010 trapping data indicates the flight may have peaked last week. Counts for the period of August 20-26 were as follows: Cashton 15, Chippewa Falls 245, Coon Valley 163, Janesville 27, and Marshfield 249.

EYESPOT: Surveys this week found many continuous and no-tillage corn fields with small, yellow circular lesions indicative of this foliar disease. Symptoms were especially prevalent in Dane, Columbia Richland and Sauk counties. Development is favored by cool, wet conditions and leaf wetness, so continued rainy weather in September could accentuate the problem. Management practices that reduce residue (crop rotation and tillage) also eliminate inoculum sources.

SOYBEANS

SOYBEAN APHID: The annual soybean aphid survey documented the lowest densities in six years. Examination of 168 soybean fields from August 2-23 found only 8% contained moderate populations of 50-146 aphids per plant, while most had fewer than 20 per plant. The state average count was 16 aphids per plant, which compares to 53 in 2009, 72 in 2008, 164 in 2007, 69 in 2006, 118 in 2005, 11 in 2004, and 758 in 2003. This insect was considerably less of a problem than anticipated. Heavy rainfall in July and August, unfavorably high temperatures, and suppression by natural enemies are thought to be major contributing factors to the abnormally low populations observed this season.

Soybean Aphid Survey Results August 2010 R5-R6 Growth Stages



GREEN CLOVERWORM: Defoliation by third generation larvae is generally light. Many acres of soybeans, principally in the south-central counties, have been treated since late July for control of these worms. Moths are still prevalent in soybean fields and black light trap collections.

FRUITS

SPOTTED TENTIFORM LEAFMINER: The third and last flight of the season has declined to low levels at most

orchards. Trap counts ranged from 0-414 moths from August 20-26, with the high count registered at Raymond in Racine County. Moth activity should subside by mid-September.

CODLING MOTH: Significant flights were registered in the southeast this week, indicating that codling moth pressure has not diminished in all areas. Economic counts of 5 or more moths per trap were reported from 4 of 15 monitoring locations.

CRANBERRY REPORT: Insect issues have been of minor importance in comparison to disease and heat stress-related concerns this season, although flea beetle populations are reportedly above economic levels in some areas. Fruits are sizing well, and color is appearing on most cultivars. Fruit rot incidence remains low state-wide. An early cranberry harvest beginning around September 25 is anticipated

VEGETABLES

LATE BLIGHT: Dry and warm weather during the past two weeks has helped limit spread of this disease. The number of counties with infected potatoes and tomatoes has not increased, although a few new cases have been reported. Since July 14, potato fields afflicted by late blight have been verified in Adams, Brown, Kewaunee, Marquette, Portage, Sauk and Waushara counties. Potato growers are advised to treat potatoes at 5-day intervals as long as the forecasting system indicates weather conditions are conducive for late blight development.



Late blight leaf lesions

Cornell University

NURSERY & LANDSCAPE

HUMMINGBIRD CLEARWING: Larvae measuring 2½ inches in length were noted this week on viburnums in St. Croix County. The late-instar caterpillars had turned reddish in advance of pupation. Defoliation was insignificant. The adult form is a clearwinged sphinx moth, remarkable for its long proboscis and hummingbird-like movement.



Hummingbird clearwing larva

Konnie Jerabek DATCP

RHIZOSPHAERA NEEDLECAST: Severe discoloration of Colorado blue spruce trees in Milwaukee, Rock and Washington counties has been attributed to this fungal disease, typified by browning and early loss of needles starting on the lower branches. Needles become infected in spring, turn yellow in July, then purplish-brown by late summer and fall. Spruce trees may be treated with a fungicide in spring when the new growth reaches ½-2 inches long, and again 4-6 weeks later.

PINE SHOOT BEETLE: Nursery inspections in the past week found infested Scotch and white pines in Rock County. This regulated pest infests the lateral shoots of pines, causing them to flag near the point where the beetle entered, turn brownish-red, and eventually fall to the ground. Newly formed adults exit through the outer bark, leaving circular holes about 2 mm in diameter. Management options include reducing availability of pine stumps and other breeding sites, chipping or burning culled and unsold trees by early spring, and treating stumps with an approved insecticide before overwintered beetles emerge. Nurseries and Christmas tree farms involved in the shipment of regulated host plants from pine shoot beetle-infested areas are required to comply

with the Pine Shoot Beetle quarantine and cannot export trees without proper certification.



Pine shoot beetle flagging and exit holes

Liz Meils DATCP

ISLAND CHLOROSIS: Symptoms were evident on the leaves of hackberry trees at nurseries in northwestern Wisconsin. This relatively new virus is characterized by blocky, bright yellow spots on the leaves that follow veins, with a distinct margin between the green and yellow areas. Severely affected foliage turns mostly yellow by late summer. This is not a disorder that requires corrective action.



Island chlorosis on hackberry

Konnie Jerabek DATCP

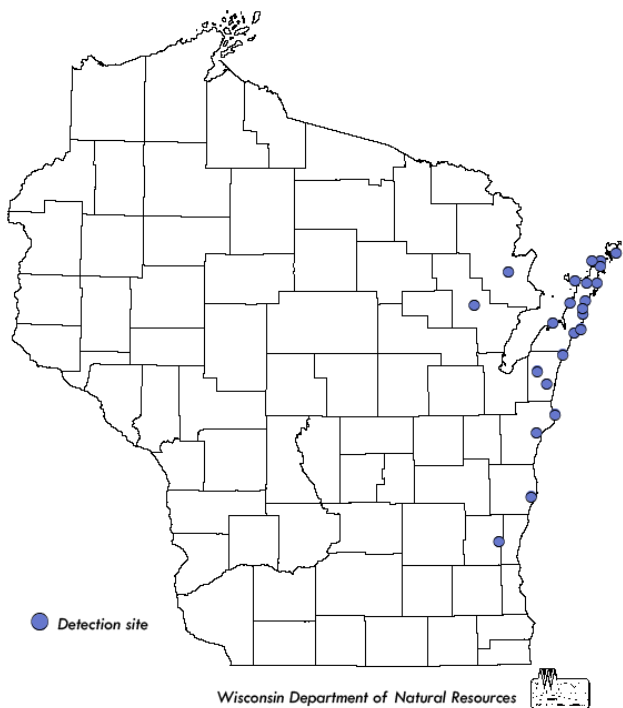
FOREST

JACKPINE BUDWORM: Surveys conducted by DNR Forest Health Specialists found less than 1,000 acres of defoliation in 2010, as compared to 4,500 acres last year. Much of the apparent decrease is due to dispersal of the population in the Minong Flowage area of Washburn

County. Historically, periodic outbreaks have developed every 6-10 years in the northern and central counties. The last major outbreak occurred in 2005, when over 220,000 jack pine acres were defoliated.

BEECH BARK SCALE: The beech scale insect that interacts with *Neonectria* fungi to cause beech bark disease has been found at sites in Door, Kewaunee, Marinette, Manitowoc, Oconto, Ozaukee and Sheboygan counties since last August. The Northern Region DNR Forest Health Specialist reports that the population is very low in all areas, with the exception of the initial Sturgeon Bay detection site where beech mortality has been observed. The map below shows the known distribution of beech scale in Wisconsin.

Beech Scale Distribution in Wisconsin August 2010

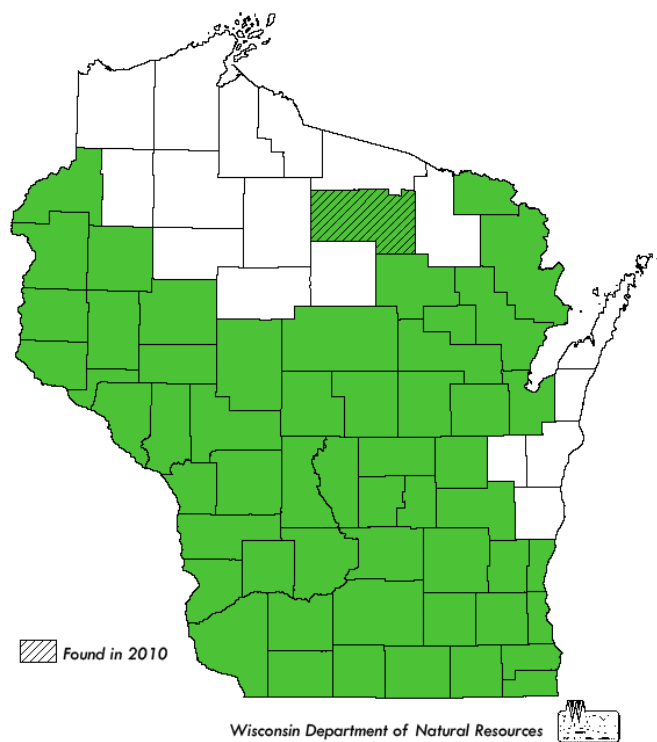


EMERALD ASH BORER: Beetles and infested ash trees were detected in two new locations this year, near Cudahy in Milwaukee County and at West Bend in Washington County. Emerald ash borer now infests portions of Brown, Crawford, Kenosha, Milwaukee, Ozaukee, Vernon and Washington counties. The infestation in the southwest along the Mississippi River in Vernon County has expanded to 32 square miles.

OAK WILT: This aggressive fungal disease has continued to spread in Wisconsin and is now present in

55 of 72 counties. Oak wilt has been verified on red oaks in northeastern Oneida County, representing the first confirmed case in that county.

Oak Wilt Distribution in Wisconsin August 2010



Oak wilt foliar symptoms

ISU Plant Disease Clinic

APPLE INSECT & BLACK LIGHT TRAP COUNTS AUGUST 20 - 26

COUNTY	DATE	SITE	STLM ¹	RBLR ²	CM ³	OBLR ⁴	OBLR ⁵	AM RED ⁶	AM YELLOW ⁷
Bayfield	8/20-8/26	Keystone	4	7	0	5	—	0	0
Bayfield	8/20-8/26	Bayfield	—	—	—	—	—	—	—
Bayfield	8/16-8/23	Orienta	69	0	0	0	—	0	0
Brown	8/20-8/26	Oneida	—	—	—	—	—	—	—
Chippewa	8/20-8/26	Chippewa Falls 1	—	—	—	—	—	—	—
Chippewa	8/20-8/26	Chippewa Falls 2	—	—	—	—	—	—	—
Dane	8/20-8/26	Deerfield	150	45	3	2	—	*1	0
Dane	8/20-8/26	McFarland	0	0	0	0	—	0	*2
Dane	8/19-8/25	Stoughton	66	34	5	20	—	0	0
Dane	8/20-8/26	West Madison	—	—	—	—	—	—	—
Dodge	8/20-8/26	Brownsville	—	—	—	—	—	—	—
Fond du Lac	8/20-8/26	Campbellsport	100	45	0	12	—	0	0
Fond du Lac	8/20-8/26	Malone	—	—	—	—	—	—	—
Fond du Lac	8/20-8/26	Rosendale	93	17	2	4	—	*1	0
Grant	8/20-8/26	Sinsinawa	—	—	—	—	—	—	—
Green	8/20-8/26	Brodhead	—	—	—	—	—	—	—
Iowa	8/20-8/26	Dodgeville	—	—	—	—	—	—	—
Iowa	8/20-8/26	Mineral Point	10	146	0	5	1	*1	0
Jackson	8/20-8/26	Hixton	48	0	0	22	0	0	2
Kenosha	8/20-8/26	Burlington	—	—	—	—	—	—	—
Marinette	8/20-8/26	Niagara	—	—	—	—	—	—	—
Marquette	8/20-8/26	Montello	9	6	0	0	—	*1	0
Ozaukee	8/20-8/26	Mequon	—	—	—	—	—	—	—
Pierce	8/20-8/26	Beldenville	—	—	—	—	—	—	—
Pierce	8/20-8/26	Spring Valley	58	54	0.75	1	0	**1.25	0
Racine	8/20-8/26	Raymond	414	235	13	6	—	0	0
Racine	8/20-8/26	Rochester	90	100	7	7	—	*3	0
Richland	8/18-8/24	Hillpoint	22	67	0	0	0	0	0
Sheboygan	8/20-8/26	Plymouth	—	—	—	—	—	—	—
Walworth	8/20-8/26	East Troy	—	—	—	—	—	—	—
Walworth	8/20-8/26	Elkhorn	—	—	—	—	—	—	—
Waukesha	8/20-8/26	New Berlin	99	71	7	1	—	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	8/20-8/26	Chipp Falls	5	0	0	0	20	0	1	10	0	0
Columbia	8/20-8/26	Arlington	0	3	1	0	3	1	1	0	0	0
Grant	8/20-8/26	Lancaster	6	0	0	0	0	0	0	3	11	0
Manitowoc	8/20-8/26	Manitowoc	—	—	—	—	—	—	—	—	—	—
Marathon	8/20-8/26	Wausau	0	1	1	16	23	1	1	0	0	0
Monroe	8/20-8/26	Sparta	0	0	0	15	27	4	0	0	0	0
Rock	8/20-8/26	Janesville	12	3	0	0	30	4	2	0	14	0
Walworth	8/20-8/26	East Troy	—	—	—	—	—	—	—	—	—	—
Wood	8/19-8/26	Marshfield	4	11	7	19	16	25	6	0	10	3
Vernon	8/20-8/26	Coon Valley	0	14	2	11	29	4	1	0	5	0

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