

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

Rain increased moisture for summer crops after an extended period of drier-than-normal weather. Across the state, the precipitation came early in the week and was accompanied by cooler and less humid conditions that eased stress on filling corn and soybeans following last week's heat. Weekly temperatures averaged near to below normal, with daytime highs on August 19 only reaching the mid-60s to lower 70s, which is 5-10 degrees below average for this time of year. Despite the showers, pockets of abnormal dryness and moderate drought persist in the southwestern counties where summer rainfall deficits currently range from 2-6 inches. Condition ratings for alfalfa, corn, potatoes and soybeans declined another 2-5 percentage points during the previous week and more rain will be needed as crops advance toward maturity.

LOOKING AHEAD

EUROPEAN CORN BORER: Egg deposition is expected to continue for another two weeks. The treatment window for second-generation larvae has closed near Beloit, Madison, La Crosse and Spring Green, and remains open only a few more days in the southeast and central districts. Final inspections for egg masses and small larvae should be conducted before 2,100 degree days (modified base 50°F) are reached.

WESTERN BEAN CUTWORM: The annual survey documented the third-lowest moth count in the last 11 years. The state cumulative count was 639 moths in 96 traps, or an average of seven per trap. This compares to 521 moths in 108 traps in 2014 (five per trap), 663 moths in 114 traps in 2013 (six per trap) and a survey record of 10,807 moths in 2010.

SOYBEAN APHID: Densities are unlikely to exceed the 250 aphid-per-plant threshold in most Wisconsin soybean fields this season. According to surveys conducted in 83 fields from August 6-19, only two sites had average counts of 201-241 aphids per plant, four sites had counts of 101-200 per plant, and the other 77 fields had averages below 100 aphids per plant. The preliminary statewide average is very low at 23 aphids per plant. Many fields are approaching R5.5-R6, the growth stages at which no yield benefit is gained by insecticide treatment. Late-season aphid control is probably uneconomical for most soybeans at this point.

LATE BLIGHT: Continued development on tomato and potato has been reported, including one new case of the disease on tomato in St. Croix County. Late blight has now been confirmed in nine Wisconsin counties. Protective treatments of green vines with a late blight-specific fungicide on a five- to seven-day schedule should be maintained. Potato tubers below-ground remain susceptible to infection even when very little foliage is present.

CORN ROOTWORM: The August beetle survey continued for the second week. Surveys in 69 corn fields in the south-central, central, west-central and northeast districts found counts of 0-4.9 beetles per plant, with an average of 0.5 per plant. Economic populations of 0.75 or more beetles per plant were documented in 20% of fields sampled as of August 19. Early results show beetle populations are comparable to last year, although the survey is far from complete.



Western corn rootworm beetle M. Auer www.raabauen/Fauna-Insekten

FORAGES & GRAINS

POTATO LEAFHOPPER: Surveys from August 13-19 found only non-economic populations. Counts were below 1.3 per sweep in all fields sampled and the average was only 0.5 per sweep. Nymphs are appearing less frequently in sweep net collections and population growth has slowed in response to the cooler weather.

PEA APHID: Counts have escalated in individual fields. Several alfalfa fields surveyed in Monroe, Richland and Sauk counties contained 4-5 per sweep, the highest populations documented in several weeks. Other sites had less than one per sweep. Pea aphids have been of minor importance this year.

ALFALFA CATERPILLAR: The adult stage of this insect is fairly abundant in alfalfa in the southern two-thirds of the state, suggesting an increase in larvae may occur by early September. Severe alfalfa caterpillar damage is rare, but results when large numbers of female butterflies oviposit on recently cut fields and the emerging larvae defoliate the regrowth.

DEGREE DAYS JAN 1 - AUGUST 19

LOCATION	50°F	2014	NORM	48°F	40°F
Dubuque, IA	2214	2033	2191	2256	3429
Lone Rock	2137	2038	—	2162	3319
Beloit	2229	2078	2228	2233	3439
Sullivan	1824	1668	2108	1927	2928
Madison	2114	1932	2123	2147	3271
Juneau	1957	1779	—	2053	3081
Racine	1773	1629	—	1875	2894
Waukesha	1824	1668	—	1927	2928
Milwaukee	1778	1620	2027	1889	2892
Hartford	1824	1668	—	1927	2928
Appleton	1884	1668	—	1989	3003
Green Bay	1782	1560	1904	1915	2899
Big Flats	2005	1792	—	2037	3081
Hancock	2005	1792	2060	2037	3081
Port Edwards	1930	1736	2021	2007	3017
La Crosse	2224	2033	2319	2264	3433
Eau Claire	2014	1846	2092	2127	3168
Cumberland	1783	1614	1959	1891	2856
Bayfield	1471	1174	—	1504	2376
Wausau	1723	1528	1919	1816	2762
Medford	1645	1470	1759	1743	2676
Crivitz	1664	1468	—	1737	2700
Crandon	1531	1344	1496	1583	2475

Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2015. NORMALS based on 30-year average daily temps, 1981-2010.

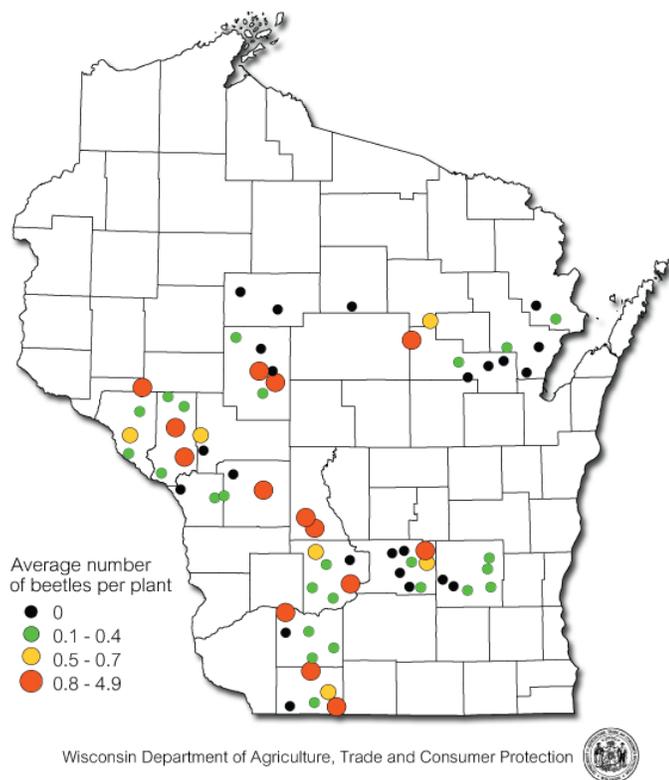
CORN

EUROPEAN CORN BORER: Second-generation larvae range from first- to fourth-instar in the southern and west-central counties. Larval infestations affecting 40-68% of the plants have been observed in a few later-planted corn fields, but most sites have low populations involving less than 16% of plants. The treatment window for summer corn borers is expected to close next week across central Wisconsin. Final management decisions for sweet corn must be made before the caterpillars have started boring into corn stalks and ears.

CORN ROOTWORM: The August beetle survey is now under way and the results collected over the next two weeks are expected to reveal any significant changes in the state beetle population. The current average of 0.5 beetle per plant is equivalent to the 2014 average when approximately the same sites were sampled. Economic

populations of 0.75 or more beetles per plant have to date been recorded at 14 sites in Clark (two sites), Columbia, Iowa, Juneau (two sites), Lafayette (two sites), Monroe, Pepin, Trempealeau (two sites), Sauk and Shawano counties. The highest average count of 4.9 beetles per plant was found north of Prairie du Sac in Sauk County. The map below summarizes the early findings of the 2015 corn rootworm beetle survey, completed in 69 of the expected 229 fields.

Corn Rootworm Beetle Survey Results 2015



CORN EARWORM: Minor flights of 2-23 moths were registered in Dane, Columbia and Vernon counties this week. A low risk of egg laying is likely to continue through early September, suggesting that regular scouting and control measures are still in order as long as green silks are present.

WESTERN BEAN CUTWORM: Light damage to corn was noted this week in Columbia, Monroe and Trempealeau counties, where an estimated 1-6% of ear tips were infested with one or two larvae. Most of the population is in the intermediate instars and should enter the pre-pupal stage by early September. A few late moths are still appearing in black light traps but the flight has essentially ended. The 2015 trapping survey documented the third-smallest flight in the 11-year history of the program,

collecting only 639 moths in 96 traps (seven moths per trap average).



Western bean cutworm larvae

Krista Hamilton DATCP

SOYBEANS

GREEN CLOVERWORM: Larvae of various sizes are still causing light defoliation of soybeans in the southern and west-central counties. The damage observed in the past week was minor. Populations have been low since the first caterpillars appeared last month.



Green cloverworm

Krista Hamilton DATCP

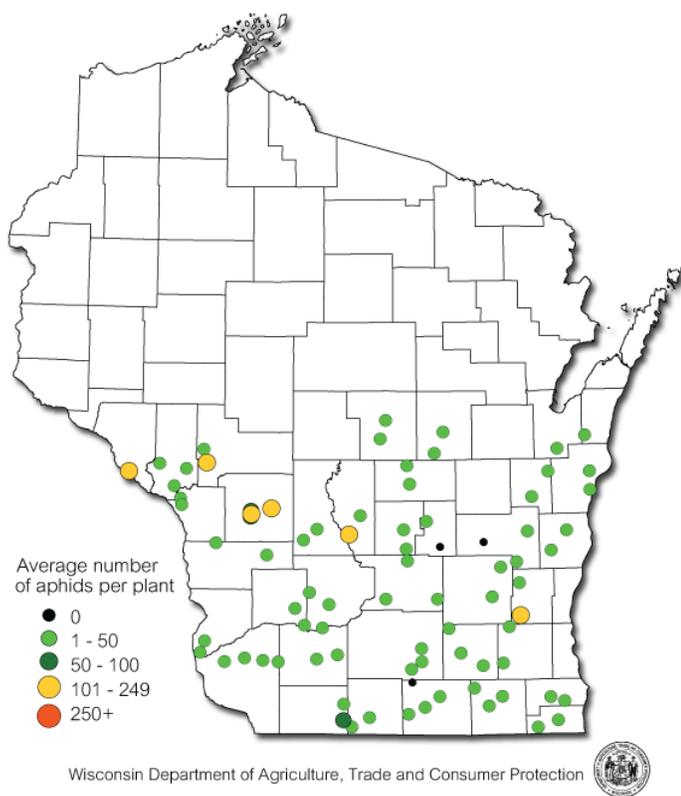
JAPANESE BEETLE: This beetle is still common in soybeans over much of the state, from Kenosha to Chippewa County. Defoliation levels varied from 1-15% in the past week, which is below the 20% threshold for soybeans in the seed-filling stages.

SOYBEAN APHID: Densities have continued to increase this month and reports indicate scattered soybean fields

have been treated for aphid control. Based on DATCP surveys from August 6-19, a small percentage of fields have developed moderate (to near-economic) infestations of 100-240 aphids per plant, but average counts have not surpassed the 250 aphid-per-plant economic threshold in any surveyed field. The preliminary state-wide average aphid count in 83 fields sampled is 23 per plant as of August 19. The second half of the survey will be finalized early next week.

A few late-planted soybean fields may still show benefit from treatment, but aphid populations are expected to decline soon due to biological controls, reduced nutritional content of soybeans at R5 and beyond, and other environmental factors. Any late-season management decisions for fields in the R5-R5.5 (beginning to mid-seed) stages must be made in the immediate future.

Soybean Aphid Survey Results August 2015



FRUITS

APPLE MAGGOT: Fly activity has persisted with the recent wet weather, and enough adults are still present in some orchards to cause problems in late cultivars. Counts ranged as high as 24 per trap for the period of August 13-19, with the weekly high capture again repor-

ted from Rochester in Racine County. This season's AM flights have been highly variable and not necessarily correlated to heavy rainfall. Apple growers should continue to monitor AM traps through the first week of September.

SPOTTED WING DROSOPHILA: Larvae and adult flies have been confirmed in 15 Wisconsin counties as of August 28, although infestations are undoubtedly more widespread. This insect poses a serious risk to ripening fruit again this year, making it imperative for growers with SWD infestations to continue treatments every 4-5 days through harvest. A list of insecticide options can be found on the UW-Madison SWD website at <http://labs.russell.wisc.edu/swd/management-2/>. For organic operations, the OMFI-approved insecticides PyGanic and Entrust are available for SWD control.

SPOTTED TENTIFORM LEAFMINER: The third and last flight of the season has peaked and is now declining at most orchards. Moths have been very abundant at some locations during this flight, with a weekly high count of 1,428 moths registered at Edgar in Marathon County since mid-August. Another larval generation should be anticipated in September based on the trap counts registered in the last two weeks. Apple growers experiencing large numbers of third brood moths may assess infestations by monitoring orchard perimeters for leaf mines.



Spotted tentiform leafminer mine Tomasz Binkiewicz www.lepidoptera.eu

VEGETABLES

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.

TOMATO FRUITWORM: Tomatoes are generally at increased risk of egg deposition and larval infestation by this pest as more of the state's sweet corn matures beyond the green silk stage and no longer provides 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.



Tomato fruitworm larva

growbetterveggies.com

LATE BLIGHT: Tomato plantings in Columbia, Fond du Lac, Polk, St. Croix, Waushara and Wood counties are reportedly infected with late blight. This disease can develop rapidly under current weather conditions, and entire plants may decline and die in as few as 7-10 days. Gardeners are advised to monitor plants for signs of infection, including brownish-black water soaked leaf lesions, dark stem lesions or sunken golden to dark brown spots with distinct rings on the fruit surface. Removal and destruction of infected plants is required if lesions are noticed. Composting will not generate sufficient heat to kill the pathogen and is not recommended.

NURSERY & FOREST

OAK SLUG SAWFLY: Larvae were found earlier this month defoliating northern red oaks in Jackson County. Named for their slug-like appearance, these yellowish-

green worms feed on the underside of leaves of red and white oaks, skeletonizing foliage and causing the leaves to appear transparent. Oak slug sawfly larvae overwinter in cocoons in leaf debris on the forest floor and adults emerge in the spring. Natural enemies generally keep numbers in check, but treatment may be warranted during outbreak years for trees with aesthetic importance.



Oak slug sawfly larvae

Tim Allen DATCP

GOLDEN CANKER: Nursery inspectors observed this common branch canker on dogwood shrubs in Jefferson County. Symptoms include wilting and death of leaves followed by branch dieback. Diseased branch tissues turn bright golden-yellow in color and develop numerous small, orange fruiting bodies. Infected branches should be pruned 4-6 inches below the golden-yellow tissue.



Golden canker on dogwood

DATCP Nursery Program

VENTURIA SHOOT BLIGHT: Quaking aspens at nurseries in Eau Claire and Milwaukee counties were showing the

black, blighted shoots indicative of this fungal disorder. The initial symptoms appear in May as irregular brown or black spots on the leaf surface, which later expand to new shoots and cause a characteristic shepherd's crook. Only young shoots and leaves are susceptible to this disease, though repeated attacks of the fungus on new growth can weaken and predispose trees to invasion by other pathogens. Secondary infection cycles can occur throughout the shoot elongation period, particularly during prolonged wet periods. The fungus overwinters in infected shoots, so pruning blighted shoots below the diseased tissue is suggested.



Venturia shoot blight on aspen DATCP Nursery Program

EMERALD ASH BORER: Jackson County in west-central Wisconsin will be quarantined for EAB following the August 6 detection of an infestation in Black River Falls. Jackson County is the 39th Wisconsin county to be placed under quarantine since EAB was first discovered in the state in 2008.



Emerald ash borer www.ipm illinois edu

VIBURNUM CROWN BORER: Signs of this clearwing moth were observed on viburnum 'Wentworth' in Milwaukee County. Diagnostic characteristics are swellings or cracks on the main stems and branches, as well as sawdust-like frass which exudes from the entrance site at the base of infested plants. Immediate removal and destruction of infested nursery stock is advised since the viburnum crown borer eventually kills its host plant.



Viburnum crown borer pupa DATCP Nursery Program

APPLE INSECT & BLACK LIGHT TRAP COUNTS AUGUST 13 - 19

COUNTY	SITE	STLM ¹	RBLR ²	CM ³	OBLR ⁴	APB ⁵	LPTB ⁶	DWB ⁷	AM RED ⁸	YELLOW ⁹
Bayfield	Keystone	35	0	2	0	—	—	—	*6	*4
Bayfield	Oriente	97	0	0	0	0	0	38	0	0
Brown	Oneida	250	5	4	7	0	0	27	0	0
Clark	Greenwood	0	0	2	0	0	0	6	0	0
Columbia	Rio	—	—	—	—	—	—	—	—	—
Crawford	Gays Mills	—	—	—	—	—	—	—	—	—
Dane	Deerfield	304	24	6	4	—	—	—	9	0
Dane	DeForest	—	—	—	—	—	—	—	—	—
Dane	Edgerton	—	—	—	—	—	—	—	—	—
Dane	McFarland	5	0	—	—	—	—	—	4	—
Dane	Mt. Horeb	64	106	1	5	2	3	1	0	0
Dane	Stoughton	154	53	9	4	2	1	0	2	0
Fond du Lac	Campbellsport	43	3	0	8	0	0	0	—	—
Fond du Lac	Malone	—	—	—	—	—	—	—	—	—
Fond du Lac	Rosendale	135	61	2	11	0	4	—	4	3
Grant	Sinsinawa	—	—	—	—	—	—	—	—	—
Green	Brodhead	80	46	4	4	13	1	64	0	0
Iowa	Mineral Point	700	135	20	10	0	4	0	—	—
Jackson	Hixton	32	0	3	0	1	0	11	0	0
Kenosha	Burlington	275	72	4	0	0	3	7	**0	—
Marathon	Edgar	—	—	—	—	—	—	—	—	—
Marinette	Niagara	53	0	0	0	0	5	21	1	0
Marquette	Montello	324	19	0	4	—	—	—	0	0
Ozaukee	Mequon	160	9	6	15	0	0	0	*5	—
Pierce	Beldenville	—	—	—	—	—	—	—	—	—
Pierce	Spring Valley	163	29	0	10	0	2	4	*0	0
Racine	Raymond	273	30	5	2	0	1	5	0	0
Racine	Rochester	360	71	6	3	1	0	—	*24	0
Richland	Hill Point	95	43	2	13	1	9	30	**0	0
Sheboygan	Plymouth	—	—	—	—	—	—	—	—	—
Walworth	East Troy	—	—	—	—	—	—	—	—	—
Walworth	Elkhorn	—	—	—	—	—	—	—	—	—
Waukesha	New Berlin	55	14	6	9	3	6	8	0	0

¹Spotted tentiform leafminer; ²Redbanded leafroller; ³Codling moth; ⁴Obliquebanded leafroller; ⁵American plum borer; ⁶Lesser peachtree borer; ⁷Dogwood borer; ⁸Apple maggot red ball; *Unbaited; **Baited; ⁹Apple maggot yellow board.

COUNTY	0	BCW ¹	CEL ²	CE ³	DCW ⁴	ECB ⁵	FORL ⁶	SCW ⁷	TA ⁸	VCW ⁹	WBC ¹⁰
Columbia	Arlington	0	4	0	0	3	1	0	0	0	0
Columbia	Pardeeville	—	—	—	—	—	—	—	—	—	—
Crawford	Prairie du Chien	0	0	0	1	0	1	0	0	0	0
Fond du Lac	Ripon	—	—	—	—	—	—	—	—	—	—
Manitowoc	Manitowoc	0	0	0	0	0	0	5	0	0	0
Marathon	Wausau	0	1	0	54	0	1	26	13	0	0
Monroe	Sparta	0	0	0	4	7	2	6	2	0	0
Rock	Janesville	0	8	0	9	5	8	0	2	0	0
Walworth	East Troy	0	0	0	23	1	4	0	0	0	1
Wood	Marshfield	0	0	0	18	0	1	12	2	0	0

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