

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

Cool temperatures punctuated with a few days of rain and isolated thunderstorms prevailed during the last reporting period. Crops have responded well to the light to moderate amounts of precipitation, but several areas of the state are still extremely dry. Soil moisture levels are reported as short or very short for approximately 51% of crop lands in the southeast, central and northeast counties. Corn and soybeans appear far more vigorous as compared to one month ago, and Wisconsin farmers are on pace to produce some of the largest crop yields in history. Harvesting of sweet corn, cucumbers, green beans, potatoes and apples is progressing rapidly under the relatively dry conditions. Insect activity was not inhibited by the cooler nightly temperatures. Some very large flights of corn earworm moths were registered at trap locations in the south central area.

LOOKING AHEAD

CORN ROOTWORM: Emergence of adults continued in the past week. Surveys of field corn in the southern counties found average populations of 0.6-1.4 beetles per plant, with high counts above 0.75 per plant in 40% of the fields examined. Very little lodging or evidence of root injury due to this insect has been noted thus far. Assessments of beetle populations to determine the

potential for damage to corn next season should begin now and continue at 7-10 day intervals through mid-September. Care should be exercised in appraising adult rootworm numbers since the northern species is often buried deep in the silks and is not as conspicuous as the western species, which is more active and can be found on other parts of the plant.

WESTERN BEAN CUTWORM: Economic infestations of this pest were detected in Columbia County, with larvae ranging in size from ¼ to 1 inch long. Survey specialists encountered fields near Portage and Cambria with 9-20% of the silks and ears infested with larvae, several of which contained 2-5 individuals of various sizes. Although the infested ears showed no outward signs of feeding injury, the presence of larvae was confirmed by stripping back the silks to inspect the ear tips. If this insect is found in 8% of the plants, an insecticide application should be timed to coincide with 70-90% egg hatch. Many fields are beyond this period now and chemical control is no longer of value.

SOYBEAN APHID: Soybean fields must be evaluated in the next week to determine if colonies have reached or surpassed the economic threshold of 250 aphids per plant on 80% of the plants. Final applications, if warranted, should be made very soon. The benefits of chemical treatments diminish beyond the R5 growth stage (beginning seed) and no yield benefit is gained by

treating fields at R6 (full seed) or later. Numerous acres of soybeans in the south central counties were sprayed for this pest between August 8 and 14.

FORAGES

POTATO LEAFHOPPER: No significant change in populations has been noted in alfalfa, except a trend toward more adults and less nymphs. Surveys indicate that potato leafhopper numbers generally remain below treatment thresholds. Counts are less than 2.1 per sweep in the southeast and south central counties, with a few exceptional fields having counts of 4.5-7.1 per sweep.

PLANT BUG: Mixed populations of tarnished and alfalfa plant bugs number 0.9-3.3 per sweep in the southern areas. Fewer nymphs were collected in sweep nets this week, indicating that reproduction has begun to decelerate.

PEA APHID: Surveys found a minor increase in pea aphid numbers in the past week. Counts range from 1.7-11.8 per sweep in Dane, Columbia, Kenosha, Racine and Walworth counties, with an average of 3.9 per sweep. Populations in alfalfa are variable due to parasitism, predation and the stage of growth.

CORN

CORN ROOTWORM: The annual survey of adult rootworms is now in progress. Examination of 73 fields found the average population is 0.7 beetle per plant in the southwest counties of Crawford, Grant, Iowa, Lafayette, Richland and Vernon, 1.4 beetles per plant in the south central counties of Columbia, Dane, Dodge, Jefferson and Rock, 1.2 beetles per plant in the southeast counties of Kenosha, Racine and Walworth, and 0.6 beetle per plant in the east central counties of Fond du Lac and Sheboygan. Economic populations of 0.75 or more beetle per plant were detected in 29 of the 73 (40%) fields surveyed as of August 14. In Dane, Dodge and Lafayette counties, a few heavily infested fields averaged 5.9-8.8 beetles per plant and the silks had been pruned to less than 1/2 inch on several plants, although pollination had already occurred. Currently the higher populations can be found in corn fields in which the silks have just begun to brown slightly. Fields with

DEGREE DAYS MARCH 1 - AUGUST 14

LOCATION	50°F	2007	NORM	48°F	40°F
Dubuque, IA	1974	2245	—	2066	3178
Lone Rock	1814	2158	—	1912	2959
Beloit	1998	2226	—	2047	3198
Madison	1806	2128	2003	1923	2950
Sullivan	1921	2056	2041	1967	3093
Juneau	1823	2043	—	1920	2962
Waukesha	1806	2000	—	1894	2949
Hartford	1760	2027	—	1890	2892
Racine	1726	1988	—	1841	2861
Milwaukee	1694	1986	1853	1808	2821
Appleton	1727	1993	1863	1856	2829
Green Bay	1616	1867	1796	1747	2713
Big Flats	1652	1998	—	1755	2727
Hancock	1676	1991	1970	1774	2755
Port Edwards	1612	1983	1893	1721	2676
La Crosse	1813	2304	2173	1901	2948
Eau Claire	1666	2123	1963	1766	2754
Cumberland	1464	1937	1873	1554	2493
Bayfield	1167	1557	1465	1247	2116
Wausau	1485	1852	1807	1589	2511
Medford	1418	1791	1637	1521	2433
Crivitz	1495	1797	—	1620	2559
Crandon	1333	1686	1465	1411	2304

Method: ModifiedB50; Sine48; ModifiedB40 as of March 1, 2008. NORMALS based on 30-year average daily temps, 1971-2001.

very little silking or entirely brown silks usually have low numbers of adult rootworms. An average count of 0.75 or more beetle per plant is considered economic by many research and extension entomologists, and indicates a high risk for root feeding injury by corn rootworm larvae in continuous corn next summer.

CORN LEAF APHID: High numbers are present in many corn fields in the southeast. Surveys in Kenosha, Racine and Walworth counties show that 5-20% of the plants in some fields have colonies of 500 or more concentrated in the tassels (and on the flag leaves/to a lesser degree in the silks). Populations are much lower in other areas, but nearly every county surveyed had a few fields with colonies of 500 or more on 10% of the plants, the level at which treatment is recommended. In most instances pollination is complete and the silks had begun to turn brown, so treatment would not benefit the corn. Predators such as ladybeetle larvae and adults, syrphid fly

larvae and green lacewing larvae are abundant in fields with high aphid populations.

JAPANESE BEETLE: These insects are still very prevalent in the southeast and south central areas. Counts of 1-4 beetles per silk were noted in a few corn fields in Kenosha, Racine and Walworth counties, and at one location in Rock County 75-80% of the plants with green silks had been pruned to the ear tip, thus preventing pollination. Insecticidal treatment is recommended for their control when 3 or more beetles per ear are present and pollination is incomplete.



Japanese beetles feeding on corn silks

Clarissa Hammond DATCP

EUROPEAN CORN BORER: The treatment interval for second generation European corn borers is open statewide. Approximately 1-2 weeks remain for corn fields in the southern and central districts to be inspected for egg masses and leaf feeding by small larvae.

Chemical treatments directed against the summer generation must be applied during the period after egg hatch and before larvae bore into the stalks, generally between 1,550 and 2,100 degree days. Refer to the table on page 121 for degree day accumulations through August 14.

SOYBEANS

SOYBEAN APHID: Analysis of the annual soybean aphid survey showed 92% of the 277 soybean fields examined contained non-economic populations of aphids.

Economic or **HIGH** densities of 250 or more aphids per plant were found at 8% of the sites, distributed principally in the central and northwest districts. Individual fields with high populations were encountered in Chippewa,

Columbia, Dane, Green Lake, La Crosse, Marquette, Pierce, Polk, Portage, St. Croix, Waupaca and Wood counties, where average densities ranged from 253-800 soybean aphids per plant. Low to moderate populations were found throughout the southern, east central and northeast districts; numbers were particularly low in the southwest and northeast. The 2008 state average density was 72 aphids per plant. This compares to 164 per plant in 2007, 69 per plant in 2006, and 118 per plant in 2005, 11 per plant in 2004, and 758 per plant in 2003. Averages by agricultural reporting district were as follows: northwest 90 per plant; northeast 34 per plant; west central 182 per plant; central 139 per plant; east central 66 per plant; southwest 15 per plant; south central 95 per plant; southeast 23 per plant. A summary map is being developed and will be published in the August 22 issue of the Wisconsin Pest Bulletin.



Soybean aphids

Krista Hamilton DATCP

FRUITS

CRANBERRY PESTS: Crop scouts statewide continue to report slow progress on this year's cranberry crop. Although the weather has been quite comfortable, heat units (degree days) continue to lag behind average. Most growers in the central production area note that a good berry count exists, but size needs to increase for good yield potential. Central production areas are running about 7-10 days behind average, while northern bog areas are as much as 10-14 days behind normal seasonal patterns. The delay in crop progress is reflected in pest management as well. Northern growers continue to treat for fruitworm, as central producers are confronted with flea beetles and various looper concerns. Trap counts of the cranberry girdler are high in some

areas and will require constant monitoring as the season progresses. The next 3-4 weeks are crucial for fruit size, even though the berries will grow well toward the mid-September period. With good growing conditions in the next 2-3 weeks, growers anticipate excellent harvest potential. – *Tod Planer, WSCGA Whole Farm Conservation Project*

OBLIQUEBANDED LEAFROLLER: Large flights of moths were registered in southwest and south central orchards in the past 7-14 days, suggesting that growers should inspect fruits for larval hatch in the week ahead. Larvae of the summer generation are commonly found on terminal and older leaves near fruit clusters.

CODLING MOTH: The second flight of codling moths has declined at most orchards, with the exception of high pheromone trap counts ranging from 37-92 moths reported near Dodgeville, Hillpoint and Bayfield. The peak of the second flight has occurred in areas of the state where 1,577 degree days (base 50°F) were recently surpassed.

ORIENTAL FRUIT MOTH: Apple growers are advised to monitor the development of this insect through the first week of September. Larvae of the Oriental fruit moth feed later in the season relative to other common orchard pests.

JAPANESE BEETLE: Spot treatment of individual trees should be considered for those orchards that continue to experience high numbers of these beetles. Considerable numbers of Japanese beetles are still active in the southern counties.

WOOLLY APPLE APHID: Colonies of aphids may continue to grow into September, causing problems at harvest. Parasitism rates appear to be low this season and natural enemies are not adequately controlling populations. Orchard IPM Specialist John Aue recommends close monitoring of colonies this month and next.

WEEDS

GIANT RAGWEED: Field observations from the past 4 weeks indicate that this weed and volunteer corn are the most prevalent weeds in soybeans at this time.

Flowering plants are now 10 feet tall in many locations, towering well above the corn. In Kenosha County, large numbers of flea beetles, presumably belonging to the redheaded flea beetle genus *Systema*, have caused noticeable defoliation of ragweed plants in a few corn fields.



Flea beetles feeding on giant ragweed

Krista Hamilton DATCP

THISTLE: Musk thistle and Canada thistle are nearly mature in the southern one-third of the state, and should soon begin to shed their seeds. Bull thistle is in flower and has begun to form seeds, while plumeless thistle is somewhat more advanced. Persistent, year-to-year control measures are required to reduce thistle population densities over time, particularly in pasture systems.



Bull thistle

Clarissa Hammond DATCP

WOOLLY CUPGRASS: Most woolly cupgrass seedlings emerge during a 2-week interval from late April to early May. Individual plants found in row crops during the August 11-14 survey period are just beginning to form

seed, suggesting that they emerged later than normal and after weed management occurred. These later emerging plants pose no direct threat to the current crop, but will contribute to the seedbank and future weed management problems.



Woolly cupgrass

Clarissa Hammond DATCP

REDROOT PIGWEED & COMMON LAMBSQUARTERS:

These common broadleaf plants were frequently observed during earlier surveys of weeds in corn and soybeans. As both species reach maturity this month, individual plants may produce and shed as many as 100,000 seeds. Their hard coat allows the seeds to persist in the soil for many years.

FOREST

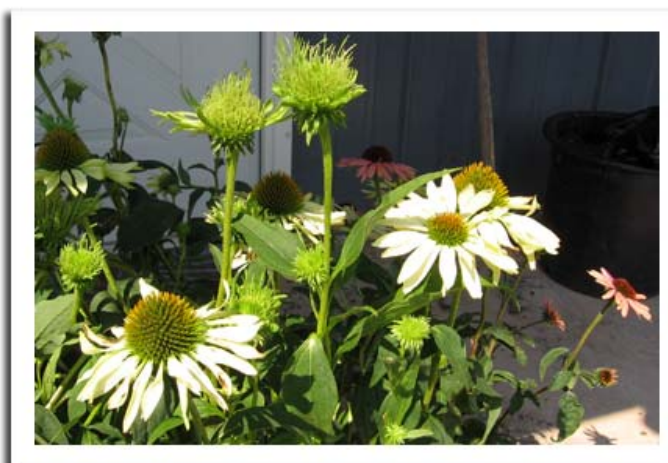
EMERALD ASH BORER: On August 1, the emerald ash borer was positively identified in the Ozaukee County Township of Saukville. This was the first detection of the invasive, wood-boring beetle in the State of Wisconsin. Days later, the emerald ash borer was also found in Washington County on a purple panel trap deployed by the DATCP emerald ash borer survey program. In response, a quarantine area including Ozaukee, Washington, Fond du Lac and Sheboygan counties has been established. Emerald ash borer has been detected only in Ozaukee and Washington counties, but Wisconsin designated Fond du Lac and Sheboygan counties as quarantine areas due to their close proximity to the known infestations and because of the high risk associated with the movement of host materials. Effective immediately, all intra- and interstate movement of emerald ash borer-host wood and wood products from Ozaukee, Washington, Fond du Lac and Sheboygan

counties is regulated, including firewood of all hardwood species, nursery stock, green lumber, waste, compost, and chips of ash species.

GYPSY MOTH TRAPPING PROGRAM: More than 50% of the 29,941 traps distributed in 52 Wisconsin counties have been checked. The statewide count was 63,695 male gypsy moths as of August 13, which compares to 120,000 moths last year and 52,000 moths in 2006. Significant increases were documented in Green and Lafayette counties where counts escalated to 1,610 and 391 moths this season, from 202 and 17 moths last season, respectively. Counties bordering the Mississippi River are also registering higher numbers this year. The adult flight period has ended in most southern areas and trap removal is scheduled to begin next week.

NURSERY & LANDSCAPE

ASTER YELLOWS: Inspectors report symptoms of this disease on Echinacea 'Big Sky', 'Sunrise' and 'Ruby Star' at nurseries in Polk and St. Croix counties. Aster yellows is caused by an organism known as a phytoplasma and transmitted by leafhoppers, principally the aster leafhopper. Symptoms of infection include abnormal flowers, irregular stem growth, and ray and disk petals that are green and much smaller than petals on uninfected plants. These diagnostic indicators are more apparent now that plants are in full bloom. The aster yellows phytoplasma persists in both wild and cultivated coneflowers and other perennial or biennial host plants over the winter, thus infected plants may act as reservoirs. Removal and destruction of infected plants is recommended.



Echinacea with aster yellows

Konnie Jerabek DATCP

VEGETABLES

CABBAGE LOOPER: A moderate count of cabbage loopers was registered at the Bourbonnais, Illinois pheromone trap location for the fourth successive week. A total of 26 moths were reported from August 8-14, in comparison to 38 last week, 24 the week before, and 49 moths from July 18-24. No moths were captured at the Chippewa Falls site in northwest Wisconsin.

IMPORTED CABBAGEWORM: Fairly substantial numbers of adults were observed in southeastern Dane County on August 14, indicating that larvae should begin to appear in commercial fields and home gardens containing cole crops in about 1 week.

TRAPPING NETWORKS

CORN EARWORM TRAPS: The major flight of this insect is underway in the southern and central areas. Spray programs were initiated in south central sweet corn fields in the last week to avoid possible damage from the larvae. Counts dramatically increased in pheromone traps located near Cottage Grove (700), Sun Prairie East (550), Stoughton (240), Sun Prairie North (150), and Madison (120), and remained static at Evansville (38) from August 5-11. Additional counts for the interval of August 7-14 were as follows: Cashton (83); Tomah (50); Marshfield (37); Manitowoc (36); Sparta (12); Janesville (5); Lancaster (9); Coon Valley A (3); Coon Valley B (3); Cameron (0); Chippewa Falls (0); Wausau (0). Egg deposition is expected to occur in the next few days. Hatch usually takes place 2-6 days after deposition.

BLACK LIGHT TRAPS: Western bean cutworm numbers declined at all monitoring locations in the past week. Peak flight activity of this insect was registered in black light traps between July 25-August 7, which compares to July 12-26 in 2007 and July 13-27 in 2006. Dingy cutworm moth counts increased in most areas, with high counts of 75 and 95 moths captured near Marshfield and Wausau, respectively. Numbers at other locations for the period of August 7-14 were as follows: Arlington (24); Chippewa Falls (35); East Troy (48); Janesville (9); Lancaster (1); Manitowoc (31); Mazomanie (5); Sparta (12). These figures represent an increase in dingy cutworm emergence, but are low relative to the weekly high count of 372 moths registered last season. The

second flight of European corn borers has accelerated despite cooler evenings. A return to warmer nightly temperatures should induce more moth activity in the week ahead.

PEST EXTRAS

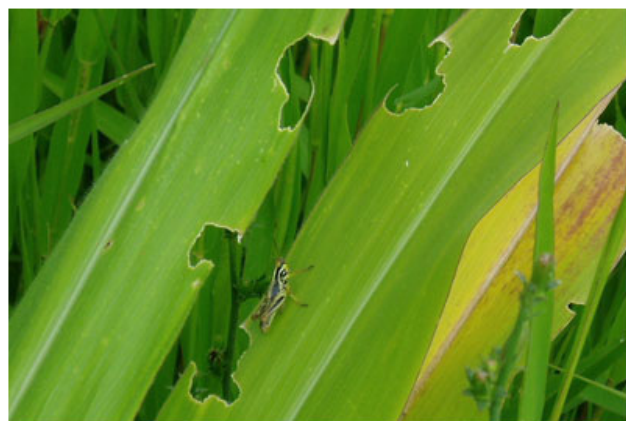
MARGINED BLISTER BEETLE: Large numbers of adults were observed mating and feeding on eastern black nightshade in Columbia County on August 13. No beetles were detected in any alfalfa field surveyed in the surrounding area.



Margined blister beetle

Krista Hamilton DATCP

GRASSHOPPERS: Populations continue to be moderate to high in margins near grassy roadsides, but remain low within the fields. Light defoliation (10-15%) of corn plants was noted near Milton in Rock County.



Grasshopper feeding on corn

Clarissa Hammond DATCP

APPLE INSECT & BLACK LIGHT TRAP COUNTS AUGUST 8-14

COUNTY	DATE	SITE	STLM ¹	RBLR ²	CM ³	OBLR ⁴	AM RED ⁵	AM YELLOW ⁶
Bayfield	8/08-8/14	Bayfield Apple			9.2 max ⁴¹			
Bayfield	8/08-8/14	Lobermeier	50	43	0	6	0	0
Bayfield	8/04-8/11	Oriente	190	0	0	1	0	0
Brown	8/08-8/14	Oneida	100	41	12	6	0	0
Crawford	8/08-8/13	Kickapoo	243	8	7	8	0	0
Dane	8/07-8/14	Deerfield	197	59	11	5	2	0
Dane	8/08-8/14	Stoughton	112	20	2	3	0	0
Dane	8/08-8/13	West Madison	60	70	3	22	0	0
Fond du Lac	8/08-8/14	Campbellsport 1	250	1	0	1	0	0
Fond du Lac	8/08-8/14	Rosendale	31	76	0	4	1	0
Iowa	8/08-8/14	Dodgeville	198	19	92	10	19	22
Iowa	8/01-8/14	Mineral Point	67	97	0	0	0	0
Jackson	8/08-8/14	Hixton	42	3	0	0	0	0
Kenosha	8/08-8/14	Burlington	216	8	2.3	2.3	0.16	0
Marinette	8/08-8/14	Niagara	708	4	3		6	1
Marquette	8/08-8/14	Montello	1224	1	2	0	*2	0
Ozaukee	8/08-8/14	Mequon	60	2.5	2	0	**1.9 *0.4	0
Pierce	8/07-8/14	Beldenville	755	21	7	0	0	1
Pierce	8/07-8/14	Spring Valley	450	2	3.3	1	*3.25	0
Racine	8/08-8/14	Raymond	1620	7	6	1	0	0
Racine	8/08-8/14	Rochester	150	22	3	23	*0.3	0
Richland	7/24-8/12	Hillpoint	616	18	37	30	**2.5	1.2
Richland	8/08-8/13	Richland Center E	285	57	9	51	*2	0
Sauk	8/08-8/13	Baraboo	190	8	2	8	0	0
Sheboygan	8/08-8/14	Plymouth	120	26	0	5	**9	0
Waukesha	8/08-8/14	New Berlin	770	12	6	0	0	0

¹Spotted tentiform leafminer; ²Redbanded leafroller; ³Codling moth; ⁴Obliquebanded leafroller; ⁵Apple maggot red ball; ⁶Apple maggot yellow board; ^{*}Unbaited red ball; ^{**}Baited red ball;

COUNTY	DATE	SITE	ECB ¹	TA ²	BCW ³	SCW ⁴	DCW ⁵	CE ⁶	CEL ⁷	WBC ⁸	FORL ⁹	VCW ¹⁰
Barron	8/07-8/14	Cameron	8	-	-	-	-	-	-	-	-	-
Chippewa	8/06-8/13	Chipp. Falls	0	0	0	0	35	0	1	0	2	0
Columbia	8/07-8/13	Arlington	24	8	1	1	24	14	5	7	5	0
Dane	8/07-8/14	Mazomanie	9	1	1	0	5	1	0	5	1	0
Grant	8/07-8/14	Lancaster	2	0	0	0	1	1	2	0	11	0
Manitowoc	8/07-8/14	Manitowoc	0	0	0	2	31	0	7	0	36	0
Marathon	8/07-8/14	Wausau	1	1	0	4	95	0	0	3	15	7
Monroe	8/07-8/14	Sparta	4	0	2	8	12	0	0	1	0	0
Rock	8/07-8/15	Janesville	6	3	0	0	6	19	0	0	0	0
Walworth	8/07-8/14	East Troy	24	0	2	0	48	1	1	0	4	0
Wood	8/07-8/14	Marshfield	3	3	0	0	75	6	4	0	4	5

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