

# 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  
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## WEATHER & PESTS

The prolonged sequence of mild, dry days that characterized the month of August has largely benefited crops. Harvest of alfalfa and small grains has advanced rapidly in absence of rain, and growers report fair to excellent yields. Corn and soybeans continue to exhibit good growth, although development remains behind normal due to late planting dates and comparatively cool temperatures. Wisconsin farmers have begun to question whether there will be sufficient time for crops to mature this fall. Scattered rains and isolated thunderstorms occurred throughout the week, but rainfall amounts were not generous and offered little relief to the very dry conditions that exist in many areas of the state. Rather favorable flying conditions for corn earworm moths prevailed, as evidenced by high pheromone trap counts at several locations.

## LOOKING AHEAD

**CORN EARWORM:** Increased captures of moths are occurring in pheromone traps and larval populations encountered in corn are likewise increasing. Larvae in all stages of development were observed in the past week, although most were either very small (2<sup>nd</sup> instar) or almost mature (5<sup>th</sup>-6<sup>th</sup> instar). In several fields, the larvae of this insect were found in combination with the

European corn borer and western bean cutworm, often in the same row or in adjacent plants. Recent treatments in sweet corn have achieved reasonably good control, but intensive survey and control measures are still in order in susceptible fields.

**EUROPEAN CORN BORER:** Egg deposition is expected to continue in the week ahead depending upon nightly temperatures, and hatch should still occur for another 2 weeks. The treatment interval for second generation larvae has closed near Beloit, Lancaster and Sullivan, and remains open only a few more days at most locations in the southern districts. Inspections for egg masses and small larvae should be conducted before 2,100 degree days are surpassed. Most of the larvae noted in the south central and southeast counties were in the 2<sup>nd</sup> and 3<sup>rd</sup> instars as of August 21.

**WESTERN BEAN CUTWORM:** Moth numbers have declined considerably at pheromone trap locations, indicating that the annual flight of western bean cutworm moths has ended. The results of a statewide trapping network are being organized and will be published in the August 29 issue of the Wisconsin Pest Bulletin. High cumulative counts for the July-August trapping period were registered near Princeton in Green Lake County (327 moths), Spring Bluff in Adams County (148 moths), and Lodi in Columbia County (119 moths). Pheromone traps should be removed at this time.

**APPLE MAGGOT:** The emergence of this pest has increased in orchards since mid-August. Growers are cautioned not to cease controls prematurely. Approximately 64 flies were captured on red ball traps in Dane, Iowa, Marinette, Marquette, Ozaukee, Pierce and Racine counties during the period of August 15-21. Apple maggot activity should be expected until 2,800 degree days (base 50°F) are surpassed. Light rainfall in the interim may stimulate increased emergence.

## FORAGES

**POTATO LEAFHOPPER:** Numbers in alfalfa rarely exceed 2.2 per sweep in the southeast and south central counties, even in the tallest fields. Exceptions were noted in the Jackson area of eastern Washington County and near Elkhorn in Walworth County, where a few fields contain counts of 3-7 leafhoppers per sweep and distinct yellowing is evident. In such fields, harvesting early should effectively reduce leafhopper populations and preclude the need for chemical treatments.

**PLANT BUG:** Tarnished as well as alfalfa plant bugs continue to be relatively common, averaging about 2-3 per sweep. Nymphs are noticeably less abundant than in previous weeks, indicating that reproduction has slowed.

**BLACK BLISTER BEETLE:** Adults were noted on goldenrod growing in the margins of alfalfa fields in Dodge, Ozaukee, Walworth and Washington counties. The larvae of this insect are predaceous upon grasshopper eggs, and therefore the adults seek out fields with high grasshopper populations in which to deposit eggs.



Black blister beetles on goldenrod

Krista Hamilton DATCP

## DEGREE DAYS MARCH 1 - AUGUST 21

LOCATION	50°F	2007	NORM	48°F	40°F
Dubuque, IA	2113	2379	—	2219	3387
Lone Rock	1954	2271	—	2066	3169
Beloit	2147	2356	—	2210	3417
Madison	1950	2243	2136	2080	3163
Sullivan	2073	2178	2180	2113	3317
Juneau	1966	2157	—	2068	3176
Waukesha	1955	2118	—	2047	3168
Hartford	1903	2139	—	2037	3106
Racine	1875	2109	—	1994	3080
Milwaukee	1839	2099	1992	1957	3037
Appleton	1871	2090	1993	1992	3044
Green Bay	1752	1964	1921	1877	2920
Big Flats	1784	2093	—	1900	2928
Hancock	1809	2086	2096	1900	2959
Port Edwards	1745	2072	2020	1857	2879
La Crosse	1959	2421	2320	2051	3165
Eau Claire	1818	2222	2097	1911	2978
Cumberland	1618	2022	2003	1701	2719
Bayfield	1287	1637	1576	1365	2301
Wausau	1616	1932	1930	1724	2712
Medford	1551	1868	1750	1657	2636
Crivitz	1616	1888	—	1744	2749
Crandon	1449	1760	1559	1537	2485

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

**ALFALFA CATERPILLAR:** Full grown larvae average about 1 per sweep in the southern counties. Adults are becoming increasingly common in alfalfa fields and adjacent areas.

## CORN

**CORN ROOTWORM:** The annual rootworm beetle survey continued in the last reporting period. Preliminary results show an increase in numbers compared to the 2007 results in the southwest and southeast districts, and a decrease in numbers in the south central and east central districts. Scattered fields in Brown, Dane, Dodge, Fond du Lac, Green, Kewaunee, Lafayette, Manitowoc, Walworth and Washington counties contain high adult populations in the range of 3.0 or more beetles per plant, and individually some plants can be found with more than 17 beetles. In a field located near Spring Prairie in Walworth County, as many as 51 beetles were observed

on a single plant. The average population is 0.8 per plant in the southwest district, 1.6 per plant in the south central district, 1.6 per plant in the southeast district, and 1.0 per plant in the east central district. An average of 0.75 or more adult corn rootworms per plant signals that root damage could occur in continuous corn next season if some form of control is not used. Economic populations were found in 53 of the 121 (44%) fields surveyed as of August 21.



Western corn rootworm beetle

Krista Hamilton DATCP

**WESTERN BEAN CUTWORM:** More infestations of this pest have been detected in the southern and central areas. In Ozaukee, Washington and Waukesha counties, larvae were found in the ear tips of corn with silks beginning to dry and 4-12% of the plants were infested. In Columbia, Dodge and Marquette counties, similar observations were made, but the infestations generally affected 5-19% of the plants in localized spots within fields. Larvae ranged in size from ¼-1 ¼ inches long (probably 2<sup>nd</sup>-5<sup>th</sup> instars). In all instances the feeding was occurring in the ear tip, where control is virtually impossible.

**EUROPEAN CORN BORER:** Second generation larvae are appearing in the ear tips of corn. Fields in the southeast counties have 5-20% of the ears infested with 1-2 larvae, which vary from just hatched to 3<sup>rd</sup> instar. Chemical control is no longer of value in such fields. The treatment period for corn borer larvae has closed near Beloit, Lancaster and in the most advanced southern areas of the state. Approximately 1 week remains for corn fields in the southern and west central districts to be inspected for egg masses and small larvae. Treatment decisions should be made before 2,100 degree days (base 50°F) are surpassed.

**PICNIC BEETLE:** Moderate to high numbers of this group of insects were observed in field corn in the southern counties of Dane, Columbia, Ozaukee, Washington and Waukesha. These beetles are often found late in the season feeding on ear tips that have been exposed by corn rootworm adult feeding or blackbird damage, and are associated with European corn borer tunnels. The adults observed in the past week had tunneled 1-2 inches under the husks and were feeding on silks and kernels of corn. Ordinarily picnic beetles are considered secondary invaders that do not initiate direct damage.

## SOYBEANS

**NORTHERN CORN ROOTWORM:** Several fields examined in Columbia County showed light defoliation attributed to this insect. Although the level of feeding injury was inconsequential, approximately 40-65% of the plants distributed throughout the fields were affected, and very large numbers of beetles were observed (2-9 per plant).



Northern corn rootworm beetle

Krista Hamilton DATCP

**SOYBEAN APHID:** Surveys of R2-R4 stage soybeans conducted earlier this month found 92% of the 277 fields examined contained non-economic populations of aphids. Despite these results, population densities have continued to build in recent weeks and numerous acres were sprayed between August 1 and 15. Chemical treatments are not recommended for fields at R6 (full seed) or later, since no yield benefit is gained. A small proportion of soybean fields still qualify for treatment, and these must be appraised now to determine if colonies have reached or surpassed the economic threshold of 250 aphids per plant on 80% of the plants.



**SOYBEAN APHID MUMMIES:** One field in Columbia County contained counts as high as 140 mummies per plant, suggesting that parasitism by the minute wasp *Lysephlebus testaceipes* had caused considerable mortality. Parasitism by this species and *Aphelinus albipodus*, as evidenced by tan, brown or black aphid mummies, has been far more noticeable and widespread this season in comparison to previous years.

## FRUITS

**CRANBERRY PESTS:** Fruits continue to develop at a slower pace than growers prefer, but size and color have shown improvement from a week ago. Insect populations are quite manageable, with some producers in the northern regions just completing fruitworm applications. Central bogs note only minor increases in flea beetle activity and girdler management closely follows economic trap counts at this point. Weed control generally has been good this year, and growers are noting weed concentrations and past herbicide use in preparation for next season's product plans. Development in the central marsh areas remains about a week behind average, while northern bogs are delayed by 10-14 days. As long as temperatures are within the normal range, size and fruit color should continue to improve during September.

– *Tod Planer, WSCGA Whole Farm Conservation Project*

**CODLING MOTH:** Reports continue to show considerable variation in codling moth pressure between Wisconsin orchards. Pheromone trap counts ranged widely in the past week, with 11 of the 21 monitoring locations registering economic numbers of 5 or more moths per trap. The weekly high count of 87 male codling moths was documented near Dodgeville in Iowa County.

**EUROPEAN RED MITE:** Apple trees affected by this pest should be watched and treated if necessary. Sporadic infestations have been reported on the Golden Supreme, Red Delicious and Golden Delicious varieties at an orchard near Mequon in Ozaukee County. Trees exhibiting light bronzing should be inspected for adult females on the upper and lower leaf surfaces and eggs near the midrib (using a 10x hand lens). Control is recommended if the economic threshold of 7.5 mites per leaf is reached. Trees with large amounts of bronzed foliage are already damaged and should not be treated with a miticide.

**SPOTTED TENTIFORM LEAFMINER:** Levels of this pest have been relatively high since the third flight began in southern orchards between July 25 and August 1. Another larval generation should be anticipated based on the trap counts registered in the last 2 weeks. The white, speckled leaf mines caused by the larger, tissue-feeder larvae were observed on apple leaves in Washington County on August 19.



Spotted tentiform leafminer tissue-feeder mine Krista Hamilton DATCP

**OBLIQUEBANDED LEAFROLLER:** Orchard IPM Specialist John Aue advises growers to continue to scout for larvae on terminals and any remaining growing points, sites at which fruits are in contact, and in areas where leaves are covering the fruit. Although late-season injury to fruits caused by this insect is usually subtle, large numbers of apples can be infested. Once the larvae have bored into the fruit, no treatments are effective. John Aue recommends a conservative threshold of 1% fruit damage at this time.

## VEGETABLES

**CUCUMBER SEED FIELD INSPECTIONS:** Inspections of cucumber seed production fields are complete. Trace amounts of angular leaf spot were observed in all 7 fields, while trace amounts of bacterial wilt were noted in 4 fields. Laboratory analysis of leaf samples collected at each site revealed anthracnose in 2 fields, powdery mildew in 1 field, and gummy stem blight in 5 fields.

**CABBAGE LOOPER:** Moths counts declined noticeably at the Bourbonnais, IL trap location, from 26 moths last week to 4 moths between August 14 and 21. The cooper-

ator near Chippewa Falls reported no moths for the 4<sup>th</sup> consecutive week. Egg hatch is expected to continue for another 1-2 weeks in the south central and southeast areas.

## WEEDS

**FOXTAIL:** Green, giant and yellow foxtail plants in the southern and central regions are currently developing seeds. Full maturation remains a few weeks away for most foxtail plants as well as other annual grass species. This event often coincides with harvest, and the machines used during harvest operations frequently aid in seed dispersal. Ideally equipment should be cleaned between fields to prevent the spread of weed seeds. At a minimum, such measures should be taken when moving from a weedy field to a non-weedy field. Delaying fall tillage after harvest may help decrease populations by allowing additional time for birds, insects and small animals to forage on the seeds.



Giant foxtail

Clarissa Hammond DATCP

**CUT-LEAVED TEASEL:** Tall stalks with prickly, oval flowerheads are visible in the margins of fields in many areas of the state, particularly in Crawford, Dane, Grant and Iowa counties where populations appear to have increased from previous years. Before the large, flowering stalks appeared, these plants were present in the same areas for 1 or more years, but as inconspicuous rosettes. Cut-leaved teasel typically flowers in the second or third year of development, usually from August through September. Clipping seed heads late in the season may prevent new plants from establishing, but control measures must be taken both prior to seed shed and late enough to stop plants from

sending up new shoots. The distribution of new plants should be documented in fall if control measures are planned for next spring.

**BARNYARD GRASS:** Surveys in southern Rock County found the characteristic burgundy inflorescence of barnyard grass in scattered soybeans fields. The seed heads ranged in color from green to purplish-red. This common grass is likely to begin producing mature seeds in the week ahead.



Barnyard grass inflorescence

Clarissa Hammond DATCP

**VELVETLEAF:** Plants with mature seeds were noted at a few advanced sites in Grant County, although most plants still contain white seeds that will eventually turn grayish-brown before they are shed. Velvetleaf seeds are extremely resilient and may persist in the soil for as long as 50 years.

## FOREST

**GYPSY MOTH TRAPPING PROGRAM:** Large numbers of moths continue to be detected in the state, particularly in the south central and central counties. The total number of male gypsy moths collected was 97,040 as of August 20. Preliminary review of the moth trap data indicates a wide pattern of distribution similar to the one observed in 2007, with higher numbers this season. In those counties where 1-3 moths per trap were registered last year, counts range from 5-8 or more this year. High counts were reported from Columbia (16,121 moths), Dane (15,906 moths), Sauk (13,951 moths) and Adams (8,514 moths) counties. The gypsy moth flight period has ended in the southern areas, a few moths persist in the central areas, and the peak of the annual flight only recently



passed in the northern areas. Official trapping resulting will be published in the final summary issue of the Wisconsin Pest Bulletin.

## NURSERY & LANDSCAPE

**CYTOSPORA CANKER:** Corkscrew willows in Dane County were infected with this very common canker. The fungus invades the bark of twigs, branches or trunks of wood plants that are physiologically stressed due to drought, flooding, insects or mechanical injury. Diseased branches and twigs should be pruned out during periods of dry weather, while cankers that develop on the trunk require removal and destruction of the entire tree to prevent further spread of this disease. Other trees affected include aspen, birch, cottonwood, poplar, spruce, willow, ash, maple, elm and apple.

**GUIGNARDIA LEAF BLOTCH:** Inspectors report light symptoms of this common fungal disease on horsechestnut and buckeye trees statewide. Diagnostic characteristics are the irregular shaped, reddish-brown leaf blotches with yellow margins that twist and wrinkle affected leaves as they increase in size and number. Fungicide treatments usually are unnecessary because the impact of this leaf blotch on tree health is minimal. Fallen leaves should be collected and disposed of to reduce inoculum available to begin new infections next spring.



*Guignardia on horsechestnut*

Liz Meils DATCP

**COLEOSPORIUM RUST:** Nannyberry viburnums in a Burnett County nursery were infected with *Coleosporium* rust, a fungus that overwinters in jack pines and other perennial herbaceous hosts. Inspectors noted heavy

amounts of the bright orange rust fungus on the leaf surfaces of affected viburnums.



*Rust on nannyberry viburnum*

Konnie Jerabek DATCP

## TRAPPING NETWORKS

**CORN EARWORM:** Significant counts were registered for the third consecutive week at locations near Cottage Grove, Madison, Stoughton and Sun Prairie in Dane County. As a consequence, several seed corn fields as well as conventional and organic sweet corn fields in the south central area were treated for this pest between August 11 and 18. Considerable increases in numbers were noted near Chippewa Falls and Manitowoc, where 55 and 60 moths were reported, respectively. Large flights may continue over the weekend. According to the Northern Illinois University Insect Migration Risk Forecast, a **MODERATE RISK** of insect migration into the Midwest states is predicted for August 22-23. Cumulative counts for the monitoring period of August 14-21 were as follows: Sun Prairie East (370); Cottage Grove (205); Sun Prairie North (193); Tomah B (150); Cashton (96); Stoughton (92); Manitowoc (60); Chippewa Falls (55); Madison (35); Coon Valley A (35); Coon Valley B (31); Evansville (24); Sparta (21); Janesville (0); Lancaster (0); Wausau (0).

**BLACK LIGHT TRAPS:** Minimal nocturnal moth activity was documented at black light trap locations during the August 14-21 monitoring period, with the exception of dingy cutworms which appeared in moderate to high numbers for the fourth week. The second flight of European corn borers continued at low levels (< 49 moths) and forage loopers were reported from Lancaster to Chippewa Falls.

# APPLE INSECT & BLACK LIGHT TRAP COUNTS AUGUST 15-21

COUNTY	DATE	SITE	STLM <sup>1</sup>	RBLR <sup>2</sup>	CM <sup>3</sup>	OBLR <sup>4</sup>	AM RED <sup>5</sup>	AM YELLOW <sup>6</sup>
Bayfield	8/15-8/21	Bayfield Apple			23 <sup>max59</sup>			
Bayfield	8/15-8/21	Lobermeier	24	11	0	0	0	0
Bayfield	8/11-8/18	Orienta	57	0	0	0	0	0
Brown	8/15-8/21	Oneida	405	8	4	6	0	0
Dane	8/15-8/21	Deerfield	686	101	15		*6	0
Dane	8/14-8/21	Stoughton	139	144	11.5	9	1	3
Fond du Lac	8/15-8/21	Campbellsport 1	400	13	0	3	0	0
Fond du Lac	8/14-8/21	Rosendale	93	14	2	3	0	0
Green	8/15-8/21	Brodhead	18	34	3	0	0	0
Iowa	8/15-8/21	Dodgeville	352	70	87	15	*8	4
Iowa	8/15-8/21	Mineral Point	23	92	0	2	*4	0
Jackson	8/15-8/21	Hixton	88	1	0	26	0	1
Kenosha	8/15-8/20	Burlington	74	41	4	2.6	0	0
Marinette	8/15-8/21	Niagara	1192	4	12	0	1.3 <sup>8 total</sup>	0
Marquette	8/15-8/21	Montello	180	2	1	0	*3.7 <sup>max9</sup>	0
Ozaukee	8/15-8/21	Mequon	90	1	6.1	0	**6.9 *1.7	
Pierce	8/15-8/21	Beldenville	990	10	10	0	2	0
Pierce	8/14-8/21	Spring Valley	693	3	7	1	**8.5 *3.3	0
Racine	8/15-8/21	Raymond	896	33	9	13	0	0
Racine	8/15-8/21	Rochester	920	67	6.93	15	*0.8	0
Richland	8/13-8/20	Hillpoint	300	45	12	38	**2 <sup>max6</sup>	0.25 <sup>max2</sup>
Waukesha	8/15-8/21	New Berlin	1120	8	28	5	0	0

<sup>1</sup>Spotted tentiform leafminer; <sup>2</sup>Redbanded leafroller; <sup>3</sup>Codling moth; <sup>4</sup>Obliquebanded leafroller; <sup>5</sup>Apple maggot red ball; <sup>6</sup>Unbaited red ball; <sup>\*\*</sup>Baited red ball; <sup>8</sup>Apple maggot yellow board.

COUNTY	DATE	SITE	ECB <sup>1</sup>	TA <sup>2</sup>	BCW <sup>3</sup>	SCW <sup>4</sup>	DCW <sup>5</sup>	CE <sup>6</sup>	CEL <sup>7</sup>	WBC <sup>8</sup>	FORL <sup>9</sup>	VCW <sup>10</sup>
Chippewa	8/13-8/20	Chipp. Falls	20	0	0	0	82	0	0	0	1	0
Columbia	8/14-8/21	Arlington	49	2	1	3	34	4	4	1	0	0
Dane	8/14-8/21	Mazomanie	16	7	1	0	12	1	2	2	1	0
Grant	8/14-8/21	Lancaster	14	2	0	0	5	3	4	2	12	0
Manitowoc	8/14-8/21	Manitowoc	2	5	0	0	31	0	5	0	21	0
Marathon	8/14-8/21	Wausau	3	2	0	1	61	0	0	0	4	1
Monroe	8/14-8/21	Sparta	35	0	0	9	19	0	0	0	0	0
Rock	8/14-8/21	Janesville	0	0	0	0	3	0	1	0	1	0
Walworth	8/14-8/21	East Troy	24	0	0	2	66	0	1	0	5	0
Wood	8/14-8/21	Marshfield	3	2	0	0	25	1	0	0	1	1

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