

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

The weather remained unsettled throughout the past week. Several rounds of severe thunderstorms developed across southwest Wisconsin on the evening of July 24, generating tornadoes, large hail, flash flooding and 90 mph wind gusts in portions of Crawford, Grant and Lafayette counties. Heavy rains of 3-5 inches damaged crops through flooding and erosion, but the resulting injury was secondary to that caused by wind-driven hail. Unprecedented hail damage was sustained by field crops over a sizeable area in Grant and Lafayette counties, leaving corn foliage shredded and soybeans unrecognizable. Near Shullsburg, a snow plow was used to clear roadways of fallen hailstones. Damage assessments are still being compiled, but preliminary estimates suggest 20,000 acres were destroyed in Lafayette County alone. Numerous fields are expected to be a 100% loss.

LOOKING AHEAD

TRUE ARMYWORM: Reports from Door, Langlade and Marinette counties in the northeast indicate that larval infestations have been detected in wheat. This insect appears to be a localized problem thus far, but close inspection of corn, oats and wheat is advised since the potential for outbreaks of second generation army-

worms is high in some areas of the state. Light feeding injury was encountered this week in corn surveyed in Grant, La Crosse, Lafayette and Monroe counties.

TWO-SPOTTED SPIDER MITE: Symptoms have become more pronounced in soybeans, corn, potatoes and vegetable crops in the south-central and central areas as a result of the recent dry weather. Stippling of soybean leaves is extensive enough in Manitowoc and Sheboygan counties that treatment is likely. Mite populations can increase exponentially during periods of low humidity and high temperatures (70x in as few as 6-10 days), accentuating the effects of drought stress. Growers should begin scouting at regular intervals for stippling, webbing and other indicators of heavy infestations. Single rainfall events following a prolonged period of dryness usually are not sufficient to avert outbreaks.

WESTERN BEAN CUTWORM: According to the degree day model for this insect, 50% of the moth population has emerged in the southwest, south-central and west-central districts, where accumulations of 1,422 degree days (base 50°F) were surpassed this week. Pheromone and black light trap collections should begin to decline noticeably in these areas by the second week of August. By contrast, only about 25% of the population has emerged in the southeast, central, east-central counties, and the peak flight remains about 3-10 days away. The 138 pheromone traps distributed in 30 Wisconsin counties

registered a total of 908 moths from July 25-31, a considerable increase over the 703 moths reported during the previous week.

SOYBEAN APHID: The first economic populations of the 2009 growing season were found on July 27-28 in Columbia and Eau Claire counties. All soybean fields should be evaluated in the week ahead to determine if densities have exceeded the economic threshold of 250 aphids per plant on 80% of plants. Chemical treatments are most effective when applied during the R2-R4 stages (full bloom to full pod).



Soybean aphids

Krista Hamilton DATCP

DEGREE DAYS JANUARY 1 - JULY 30

| LOCATION | 50°F | 2008 | NORM | 48°F | 40°F |
|--------------|------|------|------|------|------|
| Dubuque, IA | 1492 | 1670 | — | 1588 | 2603 |
| Lone Rock | 1431 | 1529 | — | 1499 | 2500 |
| Beloit | 1483 | 1681 | — | 1544 | 2594 |
| Madison | 1417 | 1519 | 1710 | 1498 | 2486 |
| Sullivan | 1450 | 1601 | 1738 | 1519 | 2541 |
| Juneau | 1416 | 1530 | — | 1495 | 2477 |
| Waukesha | 1457 | 1498 | — | 1550 | 2530 |
| Hartford | 1410 | 1468 | — | 1501 | 2463 |
| Racine | 1392 | 1426 | — | 1497 | 2434 |
| Milwaukee | 1367 | 1402 | 1544 | 1457 | 2403 |
| Appleton | 1294 | 1435 | 1574 | 1379 | 2155 |
| Green Bay | 1189 | 1344 | 1516 | 1278 | 2288 |
| Big Flats | 1293 | 1400 | — | 1359 | 2234 |
| Hancock | 1315 | 1420 | 1691 | 1358 | 2519 |
| Port Edwards | 1253 | 1357 | 1609 | 1325 | 2402 |
| La Crosse | 1451 | 1533 | 1852 | 1484 | 2519 |
| Eau Claire | 1371 | 1390 | 1667 | 1435 | 2402 |
| Cumberland | 1218 | 1206 | 1582 | 1239 | 2153 |
| Bayfield | 918 | 956 | 1212 | 946 | 1715 |
| Wausau | 1114 | 1235 | 1527 | 1169 | 2038 |
| Medford | 1130 | 1174 | 1379 | 1185 | 2065 |
| Crivitz | 1095 | 1239 | — | 1145 | 2011 |
| Crandon | 995 | 1109 | 1244 | 1008 | 1833 |

Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2009. NORMALS based on 30-year average daily temps, 1971-2001.

FORAGES

POTATO LEAFHOPPER: Populations continue to be variable, with some fields of alfalfa having 3-5 per sweep and others only 1-2. The average number observed during in the past week was 2.2 per sweep. Yellowing is occurring in alfalfa on sandy soils in Adams, Juneau, Marquette and Wood counties and extreme populations of 7-10 per sweep are present in these fields.

PEA APHID: Counts remain comparatively low in all surveyed areas, rarely exceeding 3 per sweep. Occasional fields have as few as 0.2 per sweep or as high as 8 per sweep.

PLANT BUGS: Surveys of alfalfa in the southern, central and west-central districts yielded counts of 0.5-2.1 per sweep, with the exception of Adams County where numbers varied from 3-4 per sweep. Nymphs are common in most fields and comprise about 40-50% of sweep net collections.

CORN

EUROPEAN CORN BORER: Degree day accumulations are appropriate for emergence of the first summer moths at advanced southern and western locations. The corn borer phenology model predicts this event for 1,400 degree days (base 50°F). Surveys for second generation egg masses and small larvae should be initiated by August 1 near Beloit, August 5 near Madison, and August 13 near Stevens Point. A greater percentage of egg masses are likely to be found on leaves near the ear zone. The treatment interval for second generation corn borers extends from 1,550-2,100 degree days.

WESTERN BEAN CUTWORM: Larvae are appearing in corn in the southern, central and west-central areas of the state. Surveys conducted in Adams, Columbia and Marquette counties found low infestation rates of 2-4% in 4 of 17 fields examined. Adults have also become increasingly active and number as high as 175 in phero-

more trap collections. Egg deposition is expected to intensify for another 1-2 weeks if nightly temperatures are conducive for flight activity. All susceptible corn fields should be checked at this time.

CORN LEAF APHID: Light to moderate colonies were found on corn in Adams, Juneau and Marquette counties, where approximately 10-30% of the plants were infested with 25-100 aphids per plant. Other fields examined as far north as Eau Claire and Jackson counties had very light infestations of 5-15 per plant on less than 5% of plants. Colonies of 50 or more aphids per plant on 50% of the plants may interfere with pollination.



Corn leaf aphids

Tom Harvey insects.tamu.edu

CORN ROOTWORM: Adults are becoming more abundant in silking corn fields as the peak emergence period approaches. Counts remain at less than 1 beetle per plant in surveyed fields in the southwest and west-central counties, but individual plants have as many as 5-6 beetles. Corn fields with fresh silks should be examined in the next week to determine if numbers are high enough to impair pollination. An insecticide treatment is warranted when 5 beetles per plant are present and silks are pruned to ½ inch or less before 50% of the plants are pollinated. Growers and consultants are advised to carefully examine green silks while making their counts since the northern species can be easily overlooked. A comprehensive survey of adult populations will begin in early August.

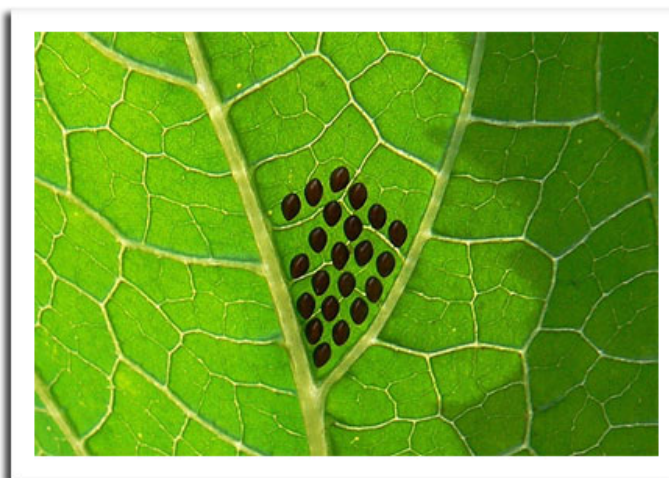
SOYBEANS

SOYBEAN APHID: Preliminary results of the annual survey now in progress indicate populations remain

below the economic threshold of 250 aphids per plant in the vast majority of Wisconsin soybean fields. Examination of R2-R4 soybeans in Brown, Columbia, Crawford, Dodge, Door, Eau Claire, Grant, Green Lake, Jackson, Kewaunee, Lafayette, Manitowoc, Marinette, Oconto, Richland, Shawano, Sheboygan and Vernon counties during the period of July 24-31 found very low densities of 0-25 aphids per plant in 70% of fields, low densities of 26-100 aphids per plant in 25% of fields, moderate densities of 101-249 aphids per plant in 1% of fields, and economic densities of 250 or more aphids per plant in 4% of fields (in Columbia and Eau Claire counties). Populations appear to be highest in the south-central and west-central districts at this time, although the extreme variability between individual fields and geographic area makes it difficult to assess the current situation. This insect requires frequent observation from now until the R5 stage of growth in August.

VEGETABLES

SQUASH BUGS: These insects are appearing on vine crops throughout the state, particularly pumpkins and squash. No serious infestations have been reported or observed, but susceptible plants may begin to show yellow speckled foliage or other evidence of infestation in the next week. The University of Wisconsin recommends 1 egg mass per plant (when plants are flowering) as a criterion for determining the need for control. Removal of crop residue in fall to reduce numbers of overwintered adults is the best preventative measure.



Squash bug eggs

onmaggiesfarm.wordpress.com

CORN EARWORM: Moths are beginning to appear regularly in the pheromone traps near Cashton, Tomah

and Sparta in Monroe County. Elsewhere the flight continues to be very low and sporadic. Latest reports indicate there is no imminent danger from this insect as of July 31. Counts this week were as follows: Cashton 2, Chippewa Falls 0, Janesville 1, Lancaster 0, Manitowoc 0, Marshfield 6, Tomah B 2, and Wausau 8.

WEEDS

CUT-LEAVED TEASEL: This invasive plant is flowering in the southern half of the state, marking a critical period for control. Although management may be more labor intensive at this late stage in the season, now is one of the last opportunities to prevent seed development and the expansion of current infestations. Persistent cutting and removal of flowering stalks for several consecutive years will effectively reduce populations over time. First-year plants in the rosette stage can be uprooted with tools similar to those used to remove dandelions.



Cut-leaved teasel

Steven Krzak www.city-data.com

FRUITS

CODLING MOTH: Several orchards in the southern and central counties reported counts of 1-11 moths during the July 24-30 monitoring period, which represents the start of the second flight of codling moths in Wisconsin. Frequent trap checks are advised in the week ahead to document the biofix. Many locations are currently in between flights, and this is reflected in the low numbers registered in the past two weeks.

APPLE MAGGOT: Economic captures of apple maggot flies were documented at 10 of 24 reporting orchards,

presumably due to scattered rains in the past week. High counts were 26 flies per baited red sphere near Mequon in Ozaukee County and 9 per unbaited yellow board at Beldenville in Pierce County. Sprays directed against the adults are justified when the economic threshold of 1 fly per **UNBAITED** trap (per week) or 5 flies per **BAITED** trap is exceeded.

CRANBERRY REPORT: The extended period of cool, dry weather has not impacted the cranberry crop to any significant degree. Most growers report a good, normal bloom in the central and northern bog areas, despite sluggish degree day accumulations throughout July. Disease incidence has been low, while insect activity appears about standard for this time of year. Weather conditions in the next 6-8 weeks will largely determine fruit size and yield. Delays in development experienced thus far could be overcome with warmer temperatures in August and September.

NURSERY & LANDSCAPE

ARBORVITAE LEAFMINER: The 'Emerald green' and 'Techney' arborvitae varieties at nurseries in Milwaukee, Racine, Rock and Waukesha counties are showing hollowed, discolored foliage with exit holes. These symptoms suggest that adult emergence has occurred and egg deposition on first- and second-year foliage is underway. Damage caused by the larval stages of this insect, namely browned foliage tips, first appears in late January or February and is commonly misdiagnosed as winter injury. Severe infestations can be treated with a systemic insecticide spray in fall or early spring, although control is seldom warranted.



Arborvitae leafminer feeding injury and exit hole

Liz Meils DATCP

WEIR'S CUSHION RUST: Last year's needles on Colorado blue spruce trees in Pierce County nurseries are beginning to sporulate. The spores, which occur in tiny, blister-like pustules, are spread by wind or rain to new needles on the same tree or others in close range. Diseased needles develop yellow spots or bands that serve as overwintering sites for next year's spores. Spruce nursery stock or Christmas trees can be treated with a series of three fungicide sprays (at 7-10 day intervals) at bud break in spring to prevent new infections.



Mottled needles caused by Weir's cushion rust Konnie Jerabek DATCP

KERMES SCALE: Reports from St. Croix County indicate that mobile crawlers are appearing on swamp white oaks. The tan, globular adult females, noted in heavy amounts during inspections this week, closely resemble oak galls but are generally more injurious to affected trees. Insecticide treatments directed against the crawler stage should be applied at this time, or as soon as the crawlers are observed.



Swamp white oak with scales on shoot tips Konnie Jerabek DATCP

EUROPEAN EARWIG: Reports from Crawford, Dane, Lafayette, Marathon and Richland counties note that these insects are still very abundant in homes, yards and gardens, while surveys of field crops continue to find unusually high numbers in corn. The problem is unlikely to subside for several more weeks, possibly until early September.

FOREST

EMERALD ASH BORER: This destructive, exotic beetle has been confirmed in Brown County near the City of Green Bay, bringing the total number of Wisconsin counties where the emerald ash borer has been detected to five, including Crawford, Ozaukee, Washington and Vernon. Federal regulators are considering a quarantine of firewood, ash nursery stock, ash timber and tree trimmings in Brown County to prevent the beetle from spreading unchecked throughout northeastern Wisconsin.

GYPSY MOTH: Examination of approximately 5,100 of the estimated 27,400 pheromone traps distributed in western Wisconsin revealed an unusually low male moth count of 240 as of July 29. Last year at this time, the count was about 16,000 moths. Moth flight has not yet been observed in northern Wisconsin.

TRAPPING NETWORKS

BLACK LIGHT TRAPS: The annual flight of western bean cutworm adults continued for the third week at most black light trap locations. Numbers registered at Mazomanie, Lancaster and Sparta probably represent 50% emergence, an event projected for 1,422 degree days (base 50°F). Egg deposition and larval hatch are now occurring in corn. High counts for the July 24-30 reporting period were 73 moths in the black light trap at Sparta and 175 moths in the pheromone trap at Grand Marsh.

European corn borers are pupating throughout the southern and central areas. The first summer moths are likely to appear in traps in the immediate future, although it will be 2-3 more weeks before substantial flights occur. On the basis of projected degree day accumulations, peak emergence of moths should not be expected until about August 12-18 in the southern areas and August 19-25 in the central areas.

APPLE INSECT & BLACK LIGHT TRAP COUNTS JULY 24 - 30

| COUNTY | DATE | SITE | STLM ¹ | RBLR ² | CM ³ | OBLR ⁴ | OBLR ⁵ | AM RED ⁶ | AM YELLOW ⁷ |
|-------------|-----------|------------------|-------------------|-------------------|-----------------|-------------------|-------------------|---------------------|------------------------|
| Bayfield | 7/24-7/30 | Keystone | 2 | 4 | 0 | 0 | — | 0 | 0 |
| Bayfield | 7/24-7/30 | Bayfield Apple | 278 | — | 0 | 4 | — | — | — |
| Bayfield | 7/24-7/30 | Erickson's | — | — | — | — | — | — | — |
| Bayfield | 7/20-7/27 | Orienta | 106 | 0 | 0 | 2 | — | — | — |
| Brown | 7/24-7/30 | Oneida | 800 | 31 | 0 | 0 | — | 0 | 0 |
| Chippewa | 7/24-7/30 | Chippewa Falls 1 | — | — | — | — | — | — | — |
| Chippewa | 7/24-7/30 | Chippewa Falls 2 | — | — | — | — | — | — | — |
| Dane | 7/23-7/30 | Deerfield | 192 | 51 | 0 | 0 | — | 5 | 0 |
| Dane | 7/24-7/30 | Stoughton | 211 | 17 | 2 | 0 | — | 1 | 0 |
| Dane | 7/24-7/29 | West Madison | 76 | 16 | 0 | 1 | — | 0 | 0 |
| Dodge | 7/24-7/30 | Brownsville | 17 | 4 | 0 | 0 | — | 0 | 0 |
| Fond du Lac | 7/24-7/30 | Campbellsport | 300 | 26 | 0 | 4 | — | 0 | 0 |
| Fond du Lac | 7/24-7/30 | Malone | 135 | 21 | 1 | 1 | — | 0 | **1 |
| Fond du Lac | 7/24-7/30 | Rosendale | 78 | 42 | 3 | 2 | — | 0 | 0 |
| Grant | 7/24-7/30 | Sinsinawa | — | — | — | — | — | — | — |
| Green | 7/24-7/30 | Brodhead | 22 | 1 | 3 | 1 | 1 | 0 | 0 |
| Iowa | 7/24-7/30 | Dodgeville | — | — | — | — | — | — | — |
| Iowa | 7/24-7/30 | Mineral Point | 234 | 26 | 2 | 0 | 0 | 0 | 0 |
| Jackson | 7/24-7/30 | Hixton | — | — | — | — | — | — | — |
| Kenosha | 7/24-7/30 | Burlington | 830 | 18 | 2 | 1 | — | 0 | 0 |
| Marinette | 7/24-7/30 | Niagara | 299 | 20 | 2 | 0 | — | — | — |
| Marquette | 7/24-7/30 | Montello | 11 | 0 | 0 | 0 | — | *1 | 0 |
| Ozaukee | 7/23-7/30 | Mequon | 300 | 14 | 4 | 0 | — | **26 *4 | — |
| Pierce | 7/24-7/30 | Beldenville | 140 | 10 | 11 | 10 | 0 | *1 | *9 |
| Pierce | 7/23-7/30 | Spring Valley | 336 | 72 | 0 | 0 | 0 | **0.5 *0.3 | 1 |
| Racine | 7/24-7/30 | Raymond | 812 | 68 | 3 | 2 | — | 0 | 0 |
| Racine | 7/24-7/30 | Rochester | 1440 | 17 | 3 | 2 | — | **25 *4.5 | 2 |
| Richland | 7/21-7/28 | Hillpoint | 173 | 38 | 1 | 0 | — | *5.5 | 0 |
| Sheboygan | 7/24-7/30 | Plymouth | 405 | 66 | 0 | 0 | — | **12 | 0 |
| Walworth | 7/24-7/30 | East Troy | — | — | — | — | — | — | — |
| Walworth | 7/24-7/30 | Elkhorn | — | — | — | — | — | — | — |
| Waukesha | 7/24-7/30 | New Berlin | 411 | 23 | 9 | 0 | — | 0 | 0 |

¹Spotted tentiform leafminer; ²Redbanded leafroller; ³Codling moth; ⁴Obliquebanded leafroller EASTERN; ⁵Oblique-banded leafroller WESTERN; ⁶Apple maggot red ball; *Unbaited red ball; **Baited red ball; 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 | 7/23-7/28 | Chipp Falls | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Columbia | 7/24-7/29 | Arlington | 0 | 5 | 2 | 0 | 1 | 0 | 0 | 69 | 0 | 2 |
| Dane | 7/24-7/29 | Mazomanie | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 0 | 0 |
| Grant | 7/24-7/29 | Lancaster | — | — | — | — | — | — | — | — | — | — |
| Manitowoc | 7/24-7/29 | Manitowoc | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 28 | 0 |
| Marathon | 7/24-7/29 | Wausau | 3 | 3 | 0 | 4 | 8 | 1 | 3 | 28 | 13 | 0 |
| Monroe | 7/24-7/29 | Sparta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | 0 | 0 |
| Rock | 7/23-7/29 | Janesville | 1 | 7 | 1 | 0 | 0 | 0 | 11 | 4 | 3 | 0 |
| Walworth | 7/24-7/39 | East Troy | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 22 | 0 | 0 |
| Wood | 7/24-7/39 | Marshfield | 8 | 9 | 1 | 0 | 11 | 4 | 4 | 45 | 13 | 7 |

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