

# 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 weather has finally begun to moderate and field work has accelerated in the past week. Relatively warm and windy days dried most upland fields enough to allow full-scale planting of corn, soybean, oats, peas and potatoes. According to the Wisconsin Field Office of USDA's National Agricultural Statistics Service, 29% of the state's corn had been planted at the start of the week, a substantial increase from 4% the week before. Soybean and oats planted were reported at 6% and 49% complete, respectively. While the progress of corn planting is significantly behind last year's average of 65% complete and the 5-year average of 60%, farmers should make considerable strides now that weather and soil conditions have become more favorable.

## LOOKING AHEAD

**BEAN LEAF BEETLE:** The first overwintered beetles were swept from a Walworth County alfalfa field on May 14, about two weeks later than last year. The outlook for bean leaf beetle populations this season is uncertain, but preliminary observations indicate that winter mortality due to climatic factors was high. The annual distribution and abundance survey is in progress in the southern counties.

**POTATO LEAFHOPPER:** Further sweeping in the south central and west districts revealed no potato leafhoppers this week. Expect the annual influx of migrants to occur before the end of the month.

**EUROPEAN CORN BORER:** The first moths of the season may appear in southern black light traps by next week. Larval surveys from last fall suggest that there is a light to moderate potential for economic infestations of first generation corn borers.

**TRUE ARMYWORM:** True armyworm moths were first trapped on April 17-23 following successive days of strong southerly winds. Catches in black light traps have been sporadic since then, but may increase very soon.

**SEEDCORN MAGGOT:** Peak emergence of seedcorn maggot flies should have occurred around May 13 after 200 degree days (3.9°C) were surpassed, and heavy egg laying is expected in the next week. In addition to corn, this insect infests soybeans, cucumbers, melons, peas, peppers, potatoes and onions.

**EASTERN TENT CATERPILLAR:** Larvae were mostly in the third instar stage of development on May 15. Heavy infestations are apparent on black cherry, chokecherry, and some mulberry, crabapple and apple trees. Significant defoliation was noted this week in Juneau

County, where many wild cherry trees contained multiple webs and occasional trees had as many as 17 separate webs.



Third instar eastern tent caterpillars Krista Hamilton DATCP

## FORAGES

**ALFALFA WEEVIL:** Development continues to be delayed with very low numbers of first and second instar larvae being found in the most advanced fields in Dane, Dodge, Fond du Lac, Iowa, Juneau, La Crosse, Monroe and Walworth counties. The highest number of larvae which could be obtained by sweeping was 4 per 50 sweeps. Tip feeding damage is visible but insignificant in the south, and is not yet apparent in the west central counties where egg hatch began just days ago. Adults are becoming more active and some stands yielded 16 per 50 sweeps. Larvae and tip feeding injury are expected to increase in first growth alfalfa after spring-laid eggs begin to hatch by May 17.

**CLOVER LEAF WEEVIL:** Most alfalfa fields containing some amount of clover have low numbers of these pale green larvae, which closely resemble alfalfa weevil larvae but are visibly larger with brown head capsules. Very light feeding on the lower leaves was noted this week, particularly on the clover plants. Sweep net counts in 12-16 inch alfalfa fields generally range from 0-4 per 50 sweeps.

**PEA APHID:** Populations throughout the southern half of the state are very low, seldom exceeding 5 per 50 sweeps. Counts average 2-3 per 50 sweeps, and many fields have no detectable population of pea aphids.

## DEGREE DAYS MARCH 1 - MAY 15

| LOCATION     | 50°F | 2007 | NORM | 48°F | 40°F |
|--------------|------|------|------|------|------|
| Dubuque, IA  | 249  | 446  | 326  | 258  | 569  |
| Lone Rock    | 234  | 420  | —    | 226  | 517  |
| Beloit       | 284  | 419  | —    | 287  | 604  |
| Madison      | 228  | 375  | 340  | 225  | 506  |
| Sullivan     | 271  | 362  | 323  | 267  | 570  |
| Juneau       | 249  | 351  | —    | 243  | 529  |
| Waukesha     | 229  | 344  | —    | 225  | 513  |
| Hartford     | 220  | 341  | —    | 215  | 495  |
| Racine       | 188  | 313  | —    | 187  | 465  |
| Milwaukee    | 184  | 312  | 247  | 182  | 454  |
| Appleton     | 185  | 322  | 263  | 177  | 428  |
| Green Bay    | 152  | 278  | 252  | 145  | 390  |
| Big Flats    | 210  | 372  | —    | 190  | 442  |
| Hancock      | 210  | 358  | 337  | 193  | 444  |
| Port Edwards | 200  | 361  | 309  | 183  | 420  |
| La Crosse    | 218  | 454  | 365  | 209  | 485  |
| Eau Claire   | 193  | 396  | 311  | 177  | 417  |
| Cumberland   | 164  | 355  | 279  | 141  | 363  |
| Bayfield     | 85   | 226  | 184  | 67   | 243  |
| Wausau       | 173  | 321  | 261  | 154  | 370  |
| Medford      | 154  | 318  | 222  | 136  | 346  |
| Crivitz      | 138  | 254  | —    | 123  | 352  |
| Crandon      | 138  | 273  | 226  | 112  | 305  |

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

**TARNISHED PLANT BUG:** Populations are increasing and average 6 per 50 sweeps in the south central and southwest counties, 7 per 50 sweeps in the west central counties, and 12 per 50 sweeps in the east central counties. No nymphs were collected this week, as is usually the case by mid-May.

**ENGLISH GRAIN APHID:** Numbers remain low since the first appearance of aphids in the state was noted on April 29. English grain aphids can only be found occasionally, and in numbers less than 5 per 50 sweeps in winter grains in the south central and west central counties.

## CORN

**BLACK CUTWORM:** Pheromone traps located in Lafayette and Monroe counties detected a sharp increase in black cutworm activity since the last report was issued. High captures of 11-12 moths occurred near

Gratiot, Shullsburg and Sparta on the evenings of May 8-11, presumably due to southerly air currents. Two separate migrations have been registered this season, the first from April 18-24 and the second from May 8-11. The larval offspring produced by moths that appeared in April are now large enough to sever corn plants, and corn emerging from the soil next week should be watched closely for evidence of feeding injury. Larvae from the second, more recent flight of moths will pose a risk to corn emerging in early to mid-June. Pheromone traps placed in the southern and west central counties registered a total of 140 black cutworm moths during the May 8-15 reporting period, with an average of 4 moths per trap.

**EUROPEAN CORN BORER:** Pupation began on May 11 near Sullivan in Jefferson County, which is currently one of the more advanced locations in Wisconsin in terms of degree day accumulations. According to the degree day model for this insect, the first moths should emerge at 374 degree days and appear in southern and central black light traps by May 23 and May 29, respectively. A light first flight of moths is anticipated in most areas based on the low state average population of larvae going into the winter (31 borers per 100 plants), with the exception of the west central district where a moderate population of 52 borers per 100 plants was documented.

## SMALL GRAINS

**TAN SPOT:** The fungal disease tan spot (*Pyrenophora tritici-repentis*) was detected at trace levels in one Fond du Lac County field and at light to moderate levels in one Dodge County field. Wheat fields in the surveyed areas were at the Feekes' 7.0-8.0 growth stages where scouting for fungal problems to determine the need for treatments is advised. Despite the anticipated high prices for wheat, fungicide treatments without prior scouting are not recommended and may not be cost-effective.

**POWDERY MILDEW:** Surveys in wheat fields in Dodge and Fond du Lac counties found trace to light infection by powdery mildew (*Blumeria graminis* f. sp. *tritici*) in 7 of 12 fields, but in 4 of the 7 fields pustules appeared to be overwintered and infection did not seem to be active.

**STEM RUST:** Barberry bushes in Dane County are showing pycnidial signs of infection by stem rust,

*Puccinia graminis*. Barberry is the alternate host of the stem rust fungus, and the site where sexual reproduction takes place. From 1918 to 1975, the USDA conducted eradication efforts on common barberry in the Midwest, in an attempt to stabilize the races of stem rust of wheat. Over the 57 years of the program, millions of barberries were removed from farms and woodlands. Small populations of common barberry remain in the Midwest, though the bushes are much reduced in numbers. Samples from Dane County barberry plants have been sent to the USDA Cereal Disease Laboratory in St. Paul, MN, to determine the *forma specialis* or particular host grass species attacked by this rust.

## WEEDS

**DANDELION:** The familiar, fluffy white dandelion seed heads have begun to form in advanced southern locations. By next week, landscapes currently speckled with yellow composite flowers will turn white as the seeds prepare to disperse. Research has demonstrated that long-distance dispersal of dandelion seeds is mainly caused by updrafts rather than high wind speeds.

**WINTER ANNUALS:** Many untilled croplands in the southern two tiers of Wisconsin counties are densely covered in flowering winter annuals such as shepherd's purse, field pennycress, yellow rocket, common chickweed, and mouseear chickweed. Shepherd's purse and field pennycress plants are forming seed pods, indicating that seed set should occur in the near future.



Field pennycress

Clarissa Hammond DATCP

**VELVETLEAF:** Weed surveys in Walworth County on May 14 found velvetleaf cotyledons emerging next to corn

seedlings. Corn is highly susceptible to competitive pressure from velvetleaf and other weeds from emergence until at least the V8 growth stage, and yield losses incurred during this critical period generally cannot be recovered.

**COMMON CHICKWEED:** Seeds began to mature and harden this week, changing from white to dull yellow in color. Treatments to control problem fields with abundant chickweed growth should be implemented immediately in the south, prior to peak seed maturity. Common chickweed is particularly disruptive in alfalfa stands, often causing reduced forage quality and prolonged drying time.



Immature common chickweed seeds

Clarissa Hammond DATCP

## FRUITS

**REDBANDED LEAFROLLER:** Pheromone trap counts listed in the apple insect table for the previous two weeks reflect peak activity of the first flight of redbanded leafroller moths, an event projected to occur between 106-160 degree days (base 50°F). Counts declined at most of the 28 cooperating orchards in the past week and populations are transitioning into the larval stages. The first larvae should be detectable in southern and central districts once 167-228 degree days have been surpassed. In Bayfield County, the first redbanded leafroller moths were reported this week.

**CODLING MOTH:** The orchard near Sinsinawa in Grant County reported having captured a single codling moth during the May 8-15 monitoring period, which represents the start of the codling moth flight period in Wisconsin. Frequent traps checks are advised for southern orchards

in the next two weeks to document the 'biofix' or first sustained capture of five male moths.

**PLUM CURCULIO:** Overwintered adults may begin to move into orchards next week, as soon as mean daytime temperatures consistently exceed 60°F. Pyramid traps used to monitor plum curculio activity should be placed immediately and checked weekly during the 6-week emergence period. Although this period may last for several weeks, 40-60% of the total emergence occurs on a single day. Early blooming varieties offer suitable sites for feeding and egg laying and are more likely to be injured after petal fall.

**SPOTTED TENTIFORM LEAFMINER:** The peak of the first flight has passed in Dane, Fond du Lac, Iowa, Jackson, and Racine counties where trap counts ranged from 425-950 moths during the May 1-8 reporting period. Peak counts of 481-1,980 moths were registered this week in Marquette, Marinette, Oneida, Sheboygan and Waukesha counties. The optimal sample period for first generation sapfeeder leaf mines begins 10-14 days after a peak flight has occurred.

**OBLIQUEBANDED LEAFROLLER:** Degree day accumulations at Beloit in Rock County totaled 284 (base 50°F) as of May 15. Obliquebanded leafroller moths typically do not appear in pheromone traps until 490 degree days have accumulated, suggesting that the counts listed in the OBLR column in the apple insect table on page 35 are probably redbanded leafroller moths that were lured into OBLR traps.

## NURSERY & LANDSCAPE

**POWDERY MILDEW:** Nurseries in Brown, St. Croix and Rusk counties were found to have several varieties of plants infected with this disease, including Rose 'Queen Elizabeth' and 'Double Knockout', Columbine 'Red Hobbit', and Phlox subalata 'Scarlet Flame'. Affected foliage appears to have a powdery white or light-gray mold growth. Spacing plants to reduce humidity levels and increase air flow is the most practical control measure, as is removing and destroying infected leaves and plant debris. Discretion should be exercised in chemical control, since defoliation and mildew symptoms can usually be tolerated by the plants.

**MAYAPPLE RUST:** Bright orange pustules were evident on the undersides of mayapples in a Pierce County greenhouse. This annually occurring rust is very common in natural settings where it sporadically causes premature leaf drop. Removing infected plants may aid in control by reducing the source of inoculum.



Mayapple rust

Konnie Jerabek DATCP

**BALSAM TWIG APHID:** First generation female aphids were prevalent on new balsam fir buds in a Pierce County Christmas tree field inspected on May 14. Inspectors noted heavy amounts of permanently twisted and curled needles on balsam and Fraser firs due to aphid feeding, which reduces the marketability and value of Christmas trees. Horticultural oils to control this pest should be applied in April or early May, after egg hatch but before bud break.



Balsam twig aphid feeding injury

Konnie Jerabek DATCP

**PAPAYA MOSAIC POTEXVIRUS:** Purslane 'Yellow Moss Rose' plants from a Polk County greenhouse were diagnosed with papaya mosaic potexvirus, a sap-

transmitted virus that readily spreads through plant contact, vegetative propagation, and contaminated tools. Symptoms observed were stunting, irregular leaf margins and chlorotic, mottled foliage.

## FOREST

**GYPSY MOTH:** Aerial treatments for gypsy moth control began on May 15, five days later than last year's start. Four sites totaling 1,846 acres in Green County received treatment on May 15. Cool, wet spring weather delayed gypsy moth egg hatch somewhat.

Green County sites were treated with the biological insecticide *Foray 48B*, which contains *Bacillus thuringiensis* var. *kurstaki* (Btk). Btk is toxic to gypsy moth caterpillars when consumed and is not harmful to people, pets, animals or plants. Two of the four sites in Green County will receive a second treatment within 5-10 days to assure later hatching larvae are killed.

Btk treatments will continue next week, with the first of two Btk treatments planned for sites in Iowa and Richland counties on Monday, May 19, weather permitting.

## APPLE INSECT COUNTS MAY 8-15

| 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 <sup>6</sup> |
|-------------|-----------|-------------------|-------------------|-------------------|-----------------|-------------------|---------------------|-----------------|
| Bayfield    | 5/08-5/15 | Erickson Orchards | 130               | 0                 |                 |                   |                     |                 |
| Bayfield    | 5/08-5/15 | Lobermeier        | 0                 | 9                 | 0               |                   |                     |                 |
| Bayfield    | 5/08-5/15 | Hillcrest         | 0                 | 0                 |                 |                   |                     |                 |
| Brown       | 5/08-5/15 | Oneida            | 975               | 131               | ***3            |                   |                     |                 |
| Chippewa    | 5/08-5/15 | Chippewa Falls    | 65                | 52                | 0               | 0                 |                     |                 |
| Dane        | 5/08-5/15 | Deerfield         | 148               | 54                | 0               | 6                 |                     |                 |
| Dane        | 5/09-5/15 | Stoughton         | 27                | 59                | 0               |                   |                     |                 |
| Dodge       | 5/09-5/15 | Brownsville       | 38                | 54                | 0               | 0                 |                     |                 |
| Fond du Lac | 5/08-5/15 | Campbellsport 1   | 50                | 100               | 0               | 0                 |                     |                 |
| Fond du Lac | 5/08-5/15 | Campbellsport 2   | 30                | 70                | 0               | 0                 |                     |                 |
| Fond du Lac | 5/08-5/15 | Rosendale         | 115               | 42                |                 |                   |                     |                 |
| Fond du Lac | 5/08-5/15 | Malone            | 900               | 90                |                 |                   |                     |                 |
| Grant       | 5/08-5/15 | Sinsinawa         | 17                | 39                | 1               |                   |                     |                 |
| Green       | 5/08-5/15 | Brodhead          | 0                 | 49                | 0               | 4                 |                     |                 |
| Iowa        | 5/08-5/15 | Dodgeville        | 390               | 20                |                 |                   |                     |                 |
| Iowa        | 5/08-5/15 | Mineral Point     | 3                 | 48                | 0               | 8                 |                     |                 |
| Jackson     | 5/09-5/15 | Hixton            | 428               | 48                | 0               | 0                 |                     |                 |
| Kenosha     | 5/08-5/15 | Burlington        | 50                | 46                | 0               |                   |                     |                 |
| Marquette   | 5/04-5/11 | Montello          | 636               | 43                | 0               | 0                 |                     |                 |
| Marinette   | 5/08-5/15 | Niagara           | 481               | 5                 |                 |                   |                     |                 |
| Ozaukee     | 5/08-5/14 | Mequon            | 5                 | 6                 | 0               | 0                 |                     |                 |
| Pierce      | 5/08-5/14 | Beldenville       | 65                | 63                | 0               | 0                 |                     |                 |
| Pierce      | 5/08-5/15 | Spring Valley     | 394               | 132               |                 |                   |                     |                 |
| Racine      | 5/08-5/15 | Rochester         | 117               | 70                | 0               |                   |                     |                 |
| Racine      | 5/08-5/15 | Raymond           | 498               | 56                | 0               | 0                 |                     |                 |
| Richland    | 5/08-5/15 | Hill Point        | 300               | 51                | 0               | 0                 |                     |                 |
| Sheboygan   | 5/08-5/15 | Plymouth          | 1980              | 138               | 0               |                   |                     |                 |
| Waukesha    | 5/08-5/15 | New Berlin        | 654               | 12                | 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>6</sup>Apple maggot yellow sticky board; <sup>\*\*\*</sup>Probably Proteoteras.

## BLACK LIGHT TRAP COUNTS MAY 8-15

| 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> | ALFL <sup>8</sup> | FORL <sup>9</sup> | VCW <sup>10</sup> |
|----------|-----------|------------|------------------|-----------------|------------------|------------------|------------------|-----------------|------------------|-------------------|-------------------|-------------------|
| Columbia | 5/07-5/14 | Arlington  | 0                | 0               | 0                | 0                | 0                | 0               | 0                | 0                 | 0                 | 0                 |
| Grant    | 5/08-5/15 | Lancaster  | 0                | 0               | 0                | 0                | 0                | 0               | 1                | 0                 | 0                 | 0                 |
| Monroe   | 5/08-5/15 | Sparta     | 0                | 0               | 0                | 0                | 0                | 0               | 0                | 0                 | 0                 | 0                 |
| Rock     | 5/08-5/15 | Janesville | 0                | 3               | 0                | 0                | 0                | 0               | 0                | 0                 | 0                 | 0                 |
| Walworth | 5/08-5/15 | East Troy  | 0                | 1               | 1                | 0                | 0                | 0               | 0                | 0                 | 1                 | 1                 |
| Wood     | 5/08-5/15 | Marshfield | 0                | 8               | 1                | 0                | 0                | 0               | 0                | 0                 | 0                 | 2                 |

<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>Alfalfa looper; <sup>9</sup>Forage looper; <sup>10</sup>Variiegated cutworm.