

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, showery conditions throughout the state delayed completion of spring tillage and interrupted planting activities. An early-week low pressure system and its associated cold front brought scattered light rain and below-normal temperatures, slowing crop growth rates and threatening plants with a late spring freeze. Temperatures on May 12-13 fell below freezing in many locations across Wisconsin, though the frost that developed during the early morning hours was brief and did not significantly impact emerging crops. Meanwhile, occasional showers reduced lingering soil moisture deficits and sustained favorable prospects for vegetative winter wheat and recently-planted corn and soybeans. With the planting of corn over 69% complete, many Wisconsin growers have moved on to soybean planting, which was 25% percent complete as of May 10. Milder conditions returned for the latter half of the week and a few days of drier weather allowed corn and soybean planting to continue.

LOOKING AHEAD

EUROPEAN CORN BORER: Degree day accumulations in advanced portions of southern Wisconsin have surpassed 374 (modified base 50°F) and conditions are now suitable for moth emergence. Black light traps

should capture the first moths of the season next week, although the majority of spring adults are unlikely to emerge before early June.

PLUM CURCULIO: Beetle activity is expected to resume with the warmer weather. Apple growers are advised to begin checking early-blooming cultivars and orchard perimeter trees for crescent-shaped oviposition scars and adult weevils. Signs of infestation usually become evident in the first 10-14 days after petal fall.

TRUE ARMYWORM: Moth collections increased substantially at the Janesville black light trap location, where 289 moths were registered during the May 7-13 reporting period. Another 24 migrants were collected in the trap near Ripon in Fond du Lac County. These counts signal that a large flight has occurred and growers should anticipate armyworm larvae appearing in corn and wheat fields 2-4 weeks from now.

BLACK CUTWORM: The start of the primary corn cutting period is predicted for May 27 in far southern Wisconsin, based on degree day accumulations (modified base 50°F) since the first significant moth flight occurred late last month. Although the unusually small black cutworm migration this spring suggests a low risk for localized outbreaks, close inspection of corn, including Bt hybrids, for evidence of cutworm feeding is recommended from emergence until the V-5 stage.

SOYBEAN APHID: Colonization of the earliest emerging soybeans could occur in the week ahead. Reports indicate that egg hatch on buckthorn has been under way for 2-3 weeks and the spring dispersal of winged aphids is expected to start as soon as soybean plants are available.



Soybean aphids

Krista Hamilton DATCP

FORAGES & GRAINS

ALFALFA WEEVIL: Larvae were collected for the first time this season on May 11 in Sauk County. Alfalfa surveyed in the south-central and southwest areas contained low counts of 1-9 per 100 sweeps in less than 5% of fields checked. Regular sampling for larvae and leaf tip feeding should begin at 300 degree days (sine base 48°F), or by May 18 across the northern half of the state. Scouting should be under way in southern Wisconsin.

PEA APHID: Surveys conducted in the southern half of the state yielded 5-139 aphids per 100 sweeps. The average count for the period of May 7-13 was 45 per 100 sweeps, a moderate increase from 23 per 100 sweeps the week before.

MEADOW SPITTLEBUG: The first nymphs and frothy spittle masses were observed earlier this week. Populations in alfalfa are currently less than two per 100 stems.

PLANT BUG: Representative counts are low and range from 2-28 per 100 sweeps. Small nymphs of the tarnished and alfalfa plant bug species are likely to appear in sweep net collections by late May.

DEGREE DAYS JANUARY 1 - MAY 13

| LOCATION | 50°F | 2014 | NORM | 48°F | 40°F |
|--------------|------|------|------|------|------|
| Dubuque, IA | 389 | 261 | 340 | 377 | 645 |
| Lone Rock | 364 | 220 | — | 350 | 588 |
| Beloit | 369 | 279 | 351 | 357 | 623 |
| Sullivan | 243 | 161 | 303 | 229 | 429 |
| Madison | 345 | 211 | 326 | 329 | 560 |
| Juneau | 289 | 169 | — | 279 | 488 |
| Racine | 204 | 152 | — | 197 | 398 |
| Waukesha | 243 | 161 | — | 229 | 429 |
| Milwaukee | 208 | 146 | 255 | 197 | 395 |
| Hartford | 243 | 161 | — | 229 | 429 |
| Appleton | 262 | 122 | — | 251 | 456 |
| Green Bay | 211 | 100 | 247 | 214 | 406 |
| Big Flats | 331 | 175 | — | 305 | 487 |
| Hancock | 331 | 175 | 314 | 305 | 487 |
| Port Edwards | 317 | 153 | 306 | 290 | 489 |
| La Crosse | 384 | 198 | 361 | 375 | 634 |
| Eau Claire | 323 | 150 | 309 | 310 | 539 |
| Cumberland | 277 | 101 | 260 | 247 | 432 |
| Bayfield | 185 | 35 | — | 159 | 269 |
| Wausau | 259 | 103 | 258 | 239 | 410 |
| Medford | 251 | 98 | 226 | 229 | 400 |
| Crivitz | 194 | 80 | — | 180 | 340 |
| Crandon | 214 | 69 | 208 | 186 | 317 |

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

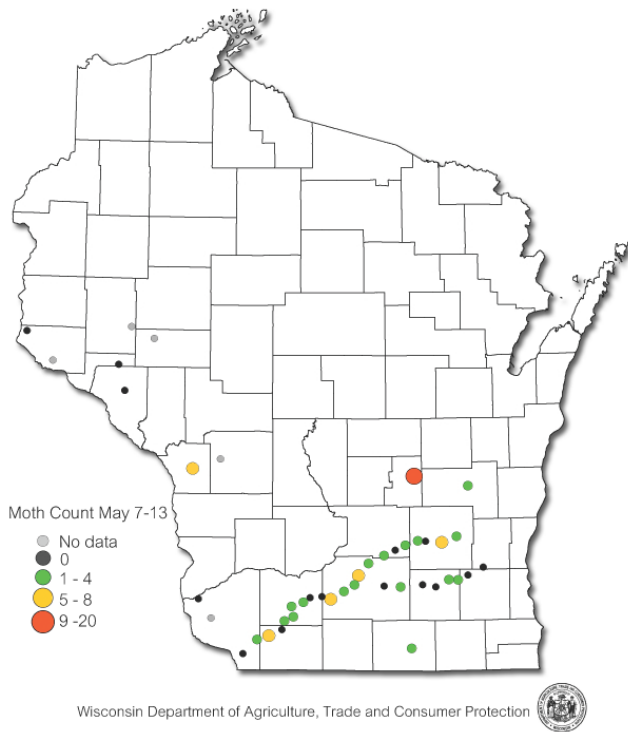
CORN

BLACK CUTWORM: Larvae resulting from the spring migration are now expected to reach the destructive late-instar cutting stages by May 27, several days later than last predicted. Signs of cutworm activity in corn, including small, irregular holes in the leaves and cut plants, could be encountered in the week ahead. Much of the state's corn acreage is at low risk of infestation this season as a result of early planting and a comparatively small April-May moth migration, but all corn should be closely monitored for cutworm feeding until the five-leaf (V-5) stage. Early detection of cutworm problems is critical for insecticide treatments to be effective and economical. The threshold for corn is when 3% of plants are damaged.

Summarized in the map below are moth counts for the period of May 7-13. The spring trapping survey has thus far resulted in the capture of 196 black cutworms in 44

traps, with a cumulative high count of 36 moths near Green Lake. A total of 649 moths had been collected by this time last season.

Black Cutworm Counts Spring 2015



TRUE ARMYWORM: Migrants were numerous in the black light trap at Janesville, indicating egg deposition on grasses and small grains will likely intensify as soon as nightly temperatures are favorable for moth activity. Large flights of armyworm adults occasionally precede larval outbreaks by 3-4 weeks, so this week’s count should be viewed as an early warning of potential problems.



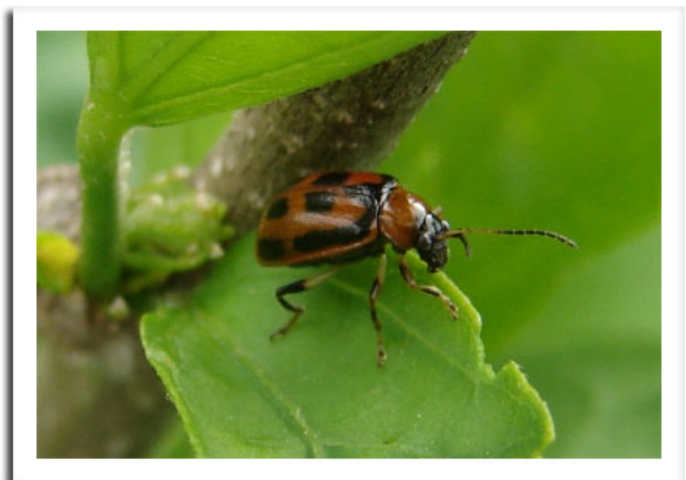
True armyworm moth

Krista Hamilton DATCP

EUROPEAN CORN BORER: Most overwintered larvae are still in the pupal stage, but a few early spring adults could emerge next week in locations such as Madison and Eau Claire where the 374 degree days (modified base 50°F) required for corn borer flight to begin are likely to be surpassed over the weekend of May 16-17. Black light trappers are advised to carefully examine trap contents during the next two weeks for early moths.

SOYBEANS

BEAN LEAF BEETLE: The first overwintered beetles were collected on May 11 from Sauk County alfalfa. This insect is inconsequential to alfalfa, but its presence and abundance can be an indicator of soybean defoliation potential. Early-planted soybeans are highly attractive to bean leaf beetles and should be checked for feeding injury beginning at emergence.



Bean leaf beetle

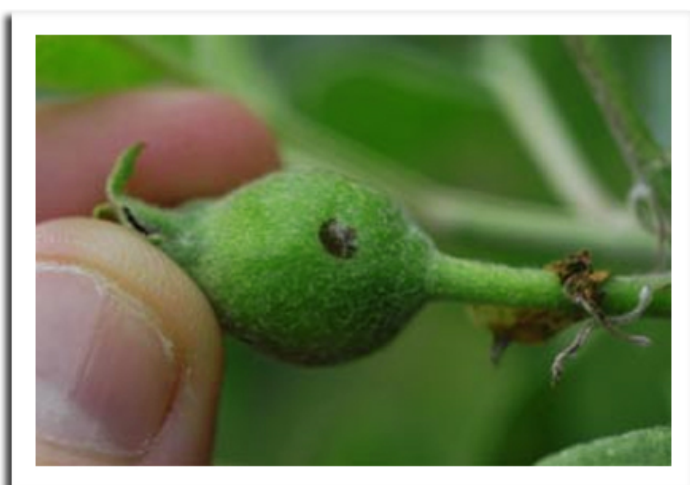
Steve Scott bugguide.net

SOYBEAN APHID: Egg hatch on buckthorn began by late April and the first soybean aphids of the growing season could begin to colonize Wisconsin soybeans before the end of the month. Documented first detection dates for the soybean aphid in Wisconsin range from May 24 in 2007 to June 9 in 2009.

FRUITS

PLUM CURCULIO: Apple growers are advised to begin examining early season varieties for crescent-shaped oviposition scars and adult weevils. Earlier warm temperatures during bloom may have prompted the beetles to move into orchard perimeter trees, and activity is

expected to increase as evening temperatures warm above 60°F. An insecticide application directed against the adults at petal fall is the conventional form of control when the economic threshold of one oviposition scar or one adult weevil is exceeded. Organic options include PyGanic (pyrethrin) applied to the outer rows and Surround WP (kaolin) on the interior trees. Any treatment targeting the plum curculio should be applied on a warm night when the weevils are most active to maximize efficacy and reduce exposure to pollinators. Scouting multiple times per week will be required to effectively assess the duration of weevil activity and the extent of infestation into orchard interiors.



Plum curculio crescent-shaped egg laying scar

www.uvm.edu

CODLING MOTH: Emergence began this week in a few eastern Wisconsin apple orchards. Moth counts were very low and the “biofix”, or first sustained male moth capture, was not established. Codling moth flight occurs consistently between 5:00 and 10:00 pm in Wisconsin, and winds must be below three mph and temperatures above 62°F during these hours for mating to occur. Since evening temperatures may be conducive for moth activity over the next few days, close monitoring of traps is suggested until the biofix is documented.

REDBANDED LEAFROLLER: Counts are expected to decline soon in most orchards as the first flight concludes. The average count this week was 67 moths per trap, which compares to 108 last week and 56 per trap the week before. Egg hatch is occurring and larvae are emerging across the southern and central counties.

SPOTTED TENTIFORM LEAFMINER: The generally lower numbers of moths captured during the May 7-13

reporting period signals most apple orchards are in between the first and second flights. Populations in the southern half of the state consist mostly of the early-stage sapfeeder larvae. The recommended scouting procedure is to sample 10 terminals and fruit spurs per tree on 2-3 trees per orchard block 10-14 days after a peak flight has occurred. Sapfeeder mines should be noticeable on the undersides of leaves. The economic threshold is one mine per 10 leaves.

OBLIQUEBANDED LEAFROLLER: The first flight of moths will likely begin by late May. Apple growers who have experienced late-season OBLR problems in recent years should consider setting additional traps now to identify problem areas and help determine where to direct management efforts later this season. Scouting for foliar feeding is also suggested at this time. Control may be warranted if feeding damage affecting more than 5% of terminals or 3% of fruit clusters is observed.



Obliquebanded leafroller moths

Shawn Steffen Utah State University

VEGETABLES

ONION MAGGOT: Peak emergence is anticipated in the Beloit, La Crosse, Lone Rock and Madison areas of south-central and southwestern Wisconsin next week, following the accumulation of 680 degree days (simple base 40°F). The accumulation above a base temperature of 40°F was 634 at La Crosse and 560 at Madison as of May 13. Flies of this spring generation are usually the most abundant and damaging, especially at sites where onions are grown in succession. Preventative soil insecticides should be considered if maggot damage to the last season’s crop exceeded 5-10%. Home gardeners are

advised to rotate this year's onion plantings as far as possible from last year's to reduce the probability of damage.

SPOTTED CUCUMBER BEETLE: Spring migrants were collected in La Crosse and Vernon County alfalfa late last week. These distinctive yellowish-green beetles with black spots do not overwinter in Wisconsin, but arrive at this time of year on storm fronts originating in the southern United States. Both the spotted species and the striped cucumber beetle are efficient vectors of bacterial wilt of cucumbers, muskmelons and watermelons. Scouting field edges and interiors multiple times per week is recommended starting in early June.



Spotted cucumber beetle

[imarsman flickr.com](http://www.flickr.com/photos/imarsman/)

COLORADO POTATO BEETLE: Emergence of overwintered adults has been noted in Columbia and Vernon counties, indicating that oviposition on potatoes, tomatoes, eggplants and other host plants should begin before the end of the month. The bright orange-yellow eggs are deposited in clusters of 15-30 on the undersides of leaves. Egg hatch occurs in 4-9 days.

NURSERY & FOREST

BOTRYTIS BLIGHT: Nursery inspectors observed this gray mold disease of greenhouse floral crops on begonia, geranium and New Guinea impatiens in Kenosha, Racine and Waukesha counties. Symptoms of botrytis appear as brown spots on flower petals and irregularly-shaped necrotic areas on the leaves. The leaf spots develop a grayish mass of fungal spores that disperse on splashing water or wind. Botrytis can develop at any stage and may affect any plant part. Measures that reduce humidity

levels below 85% and increase air circulation can help minimize its occurrence. Treatment with an appropriate fungicide or removal from the greenhouse is recommended for symptomatic plants.



New Guinea impatiens leaf necrosis due to Botrytis www.ppd.l.purdue.edu

DAYLILY LEAF STREAK: Several daylily varieties at nurseries visited in the previous week were infected with this fungal disease, characterized by a central, yellow streak along the leaf midvein that starts at the leaf tips and progresses downward. Removing infected leaves as they appear, minimizing overhead watering, and fertilizing plants properly to promote growth of new leaves should help to reduce the spread of this primarily cosmetic daylily disorder. Complete removal of dead leaves each fall is also recommended to eliminate the source of the leaf streak fungus.



Daylily leaf streak

Liz Meils DATCP

FIRE BLIGHT: During recent inspections, this destructive bacterial disease was found on 'Bing', 'Black Tartarian',

'Rainier', and 'Sweetheart' cherry trees at nursery retail locations in Kenosha, Racine and Waukesha counties. Symptoms are cankered twigs and branches with blackened, drooping foliage that appear to have been scorched. The pathogenic bacteria multiply on the edge of cankers formed the previous year and are disseminated by insects, wind, and rain splash. Prompt removal of cankered branches or "strikes" 12 inches beyond the diseased area can reduce the problem. Sterilizing tools with a 10% bleach solution between cuts is also recommended.



Branch or 'strike' infected with fire blight M. Allen treexperts.mb.ca

spread. Carrying over plant material from season to season increases the risk of INSV and should be avoided by nurseries and greenhouses with a history of virus problems.



INSV symptoms on tuberous begonia

Anette Phibbs DATCP

GYPSY MOTH: Aerial spraying for gypsy moth caterpillars started May 13 with the treatment of 3,300 acres in Crawford, Green, La Crosse, Lafayette, Monroe and Rock counties. During this first phase of the 2015 spray season, planes are applying *Bacillus thuringiensis* var. *kurstaki* or Btk, a biological insecticide acceptable for organic use. Most sites will receive a second application 3-7 days after the first one. Twenty-one counties are scheduled to be treated this year. Larvae are predominantly in the first to second instars throughout southern and central Wisconsin.

IMPATIENS NECROTIC SPOT VIRUS: This virus disease was confirmed on several tuberous begonia samples collected from a Brown County nursery. INSV is spread primarily by the western flower thrips and propagation of infected plants or cuttings. The virus can infect plants such as amaranthus, aster, calendula, coleus and dahlia, rendering them unsalable. Symptoms vary by host and may present as stunting, necrotic leaf spots, ring spots, streaking or mosaic patterns. Control of thrips populations in greenhouse settings is critical to reducing INSV

APPLE INSECT & BLACK LIGHT TRAP COUNTS MAY 7-13

| COUNTY | SITE | STLM ¹ | RBLR ² | CM ³ | OBLR ⁴ | APB ⁵ | LPTB ⁶ |
|-------------|---------------|-------------------|-------------------|-----------------|-------------------|------------------|-------------------|
| Bayfield | Keystone | 4 | 0 | 0 | 0 | — | — |
| Bayfield | Orienta | 5 | 0 | — | — | — | — |
| Brown | Oneida | 400 | 33 | 2 | — | — | — |
| Clark | Greenwood | 20 | 20 | 0 | 0 | 0 | 0 |
| Columbia | Rio | 36 | 47 | 0 | 0 | — | — |
| Crawford | Gays Mills | 257 | 69 | — | — | 10 | 0 |
| Dane | Deerfield | — | — | — | — | — | — |
| Dane | DeForest | 1 | 9 | 0 | 2 | 1 | 0 |
| Dane | Edgerton | — | 157 | 0 | 0 | 6 | 2 |
| Dane | McFarland | 95 | 76 | — | — | — | — |
| Dane | Mt. Horeb | 99 | 140 | 0 | 0 | 31 | 0 |
| Dane | Stoughton | 40 | 100 | 0 | 1 | 0 | 0 |
| Fond du Lac | Campbellsport | 52 | 57 | 0 | 0 | 0 | 0 |
| Fond du Lac | Malone | 38 | 12 | 5 | 0 | 0 | 0 |
| Fond du Lac | Rosendale | 56 | 131 | — | — | — | — |
| Grant | Sinsinawa | 2 | 9 | 0 | 0 | 3 | 0 |
| Green | Brodhead | 31 | 54 | 0 | 0 | 18 | 0 |
| Iowa | Mineral Point | 100 | 116 | 0 | 0 | 14 | 2 |
| Jackson | Hixton | 90 | 24 | 0 | 0 | 0 | 0 |
| Kenosha | Burlington | 85 | 54 | 0 | 0 | 0 | 0 |
| Marathon | Edgar | 336 | 72 | 0 | 0 | 0 | 0 |
| Marinette | Niagara | 8 | 7 | — | — | — | — |
| Marquette | Montello | 5 | 243 | 0 | 0 | 0 | 0 |
| Ozaukee | Mequon | 165 | 162 | — | — | 0 | 0 |
| Pierce | Beldenville | 324 | 85 | 0 | 0 | 0 | 0 |
| Pierce | Spring Valley | 33 | 23 | — | — | — | — |
| Racine | Raymond | 150 | 4 | 3 | 0 | 0 | 0 |
| Racine | Rochester | 210 | 104 | 0 | 0 | 0 | 0 |
| Richland | Hill Point | 756 | 32 | 0 | 0 | 0 | 0 |
| Sheboygan | Plymouth | 494 | 145 | — | — | 0 | 0 |
| Walworth | East Troy | — | — | — | — | — | — |
| Walworth | Elkhorn | — | — | — | — | — | — |
| Waukesha | New Berlin | 20 | 22 | 2 | 3 | 0 | 0 |

¹Spotted tentiform leafminer; ²Redbanded leafroller; ³Codling moth; ⁴Obliquebanded leafroller; ⁵American plum borer; ⁶Lesser peachtree borer.

| COUNTY | SITE | BCW ¹ | CEL ² | CE ³ | DCW ⁴ | ECB ⁵ | FORL ⁶ | SCW ⁷ | TA ⁸ | VCW ⁹ | WBC ¹⁰ |
|-------------|------------------|------------------|------------------|-----------------|------------------|------------------|-------------------|------------------|-----------------|------------------|-------------------|
| Columbia | Arlington | | | | | | | | | | |
| Crawford | Prairie du Chien | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| Dane | Mazomanie | | | | | | | | | | |
| Fond du Lac | Ripon | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 0 |
| Manitowoc | Manitowoc | | | | | | | | | | |
| Marathon | Wausau | | | | | | | | | | |
| Monroe | Sparta | | | | | | | | | | |
| Portage | Plover | | | | | | | | | | |
| Rock | Janesville | 0 | 4 | 0 | 0 | 0 | 1 | 0 | 289 | 0 | 0 |
| Vernon | Coon Valley | | | | | | | | | | |

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