

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

Mild, mostly dry weather favored spring fieldwork during the week ending May 10. Above-normal afternoon high temperatures in the 70s to mid-80s prevailed, while nighttime lows ranged from the 40s to near 60°F. Rain showers and a few thunderstorms occurred in the evening and overnight hours of May 8-9, bringing ¼ to 1 inch of rainfall to some areas of the state, though totals were generally light. Partly sunny skies and warm weather afforded farmers a larger window for fieldwork activities, as planting of corn advanced slightly ahead of last year's pace. Fifteen percent of this year's corn crop was in the ground as of May 6, compared to 14% in 2017. Soybean planting began in full in southern fields, and 5% of the state's intended acres have been planted, three days ahead of last year but one day behind the five-year average. Wisconsin fields, pastures, and landscapes have shown a pronounced change in color to deep green, and plants have responded to the warmth and moisture with a burst of growth.

LOOKING AHEAD

BLACK CUTWORM: Migrants arrived in moderate to high numbers for the second consecutive week. The DATCP network of 46 pheromone traps captured 483 moths from May 3-9, for a cumulative total of 713 moths since flights

into the state began on April 12. Egg deposition has intensified on winter annual weeds such as common chickweed, peppergrass, and yellow rocket in no-tillage and reduced tillage fields. Based on the first major migration event on April 30 and the expected rapid accumulation of degree days next week, larvae produced by moths of the spring flight could begin cutting corn seedlings by May 19. Black cutworm larvae require 300 growing degree days (modified base 50°F) beyond an intense capture to develop from the egg to plant-cutting fourth instar stage.

EUROPEAN CORN BORER: Pupation of overwintered larvae is expected to begin in the next two weeks, as mountain ash flowers. According to the 2017 annual larval abundance survey, populations remain near historic lows and the first flight of moths emerging in June will be extremely small again this year. Black light traps should be installed by May 16 to monitor the spring flight.

PLUM CURCULIO: Migration from hibernation sites into apple orchards is underway in locations where mean daytime temperatures have exceeded 60°F for three to four days. Activity is likely to increase sharply in the week ahead.

GYPSY MOTH: Larvae began emerging from overwintered egg masses on May 4 in Dane County. Phen-

ological indicators of gypsy moth egg hatch include beginning bloom of eastern redbud and saucer cup magnolia petal fall. Larval emergence can be anticipated next week in central and northern Wisconsin.

GRAPE FLEA BEETLE: Adult beetles and bud damage have been reported from Dane and Vernon County vineyards. Biweekly scouting is suggested during bud swell and until shoot growth reaches 2-3 inches. At this time of year, feeding by adult flea beetles damages primary buds, preventing shoot expansion and ultimately reducing grape yields. Plants on the margins of vineyards are at greatest risk of injury.



Grape flea beetles and bud injury

www.omafra.gov.on.ca

DEGREE DAYS JANUARY 1 - MAY 9

| LOCATION | 50°F | 2017 | NORM | 40°F |
|--------------|------|------|------|------|
| Dubuque, IA | 282 | 349 | 310 | 592 |
| Lone Rock | 248 | 318 | — | 527 |
| Beloit | 253 | 329 | 318 | 531 |
| Sullivan | 204 | 280 | 274 | 448 |
| Madison | 231 | 293 | 297 | 495 |
| Juneau | 203 | 266 | — | 444 |
| Racine | 187 | 238 | — | 417 |
| Waukesha | 187 | 258 | — | 421 |
| Milwaukee | 186 | 236 | 232 | 427 |
| Hartford | 195 | 257 | — | 434 |
| Appleton | 175 | 199 | — | 382 |
| Green Bay | 166 | 198 | 222 | 369 |
| Big Flats | 207 | 258 | — | 443 |
| Hancock | 177 | 221 | 283 | 376 |
| Port Edwards | 178 | 217 | 278 | 381 |
| La Crosse | 249 | 291 | 330 | 520 |
| Eau Claire | 215 | 240 | 281 | 427 |
| Cumberland | 153 | 150 | 232 | 310 |
| Bayfield | 108 | 82 | — | 243 |
| Wausau | 155 | 162 | 233 | 332 |
| Medford | 152 | 144 | 201 | 316 |
| Crivitz | 172 | 177 | — | 354 |
| Crandon | 143 | 122 | 184 | 300 |

*Method: Modified B50; Modified B40 as of January 1, 2018.
NORMALS based on 30-year average daily temps, 1981-2010.*

FORAGES & GRAINS

ALFALFA WEEVIL: Adult weevils were collected in Dane and Grant counties on May 7 and 8, indicating the start of spring egg deposition in alfalfa stems. The first appearance of larvae is forecasted for May 11 across far southern Wisconsin and May 18 in northern fields.

PEA APHID: Egg hatch was confirmed on May 7. Alfalfa sampled in the southwestern areas contained very low counts of 1-2 aphids per 100 sweeps. Aphid densities in alfalfa historically begin escalating by mid-May and peak about two weeks before the first harvest.

TARNISHED PLANT BUG: Adults of this species are already common in six to 12-inch fields. The early levels noted are insignificant for alfalfa, but their presence suggests this fruit pest will soon begin feeding on flower buds in apple orchards and strawberry plantings.

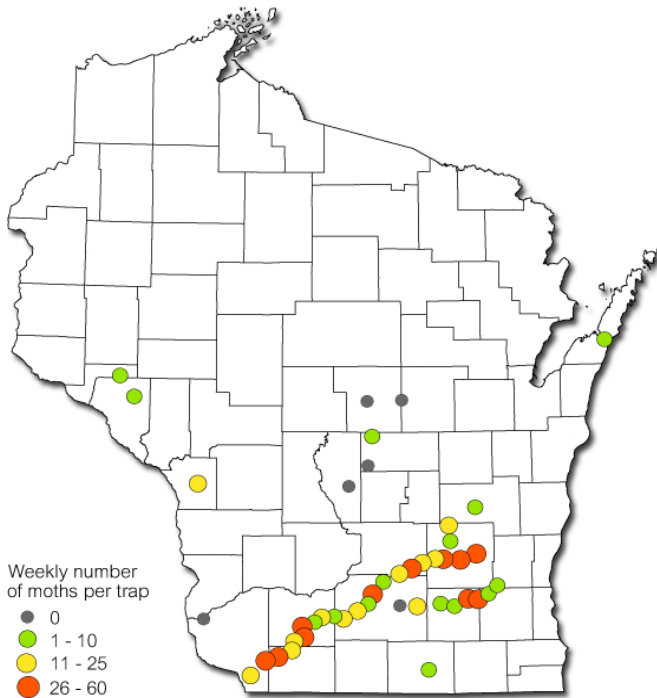
CORN


EUROPEAN CORN BORER: According to the findings of last fall's abundance survey, the overwintered generation of larvae should produce an extremely small flight of moths later this month. The annual European corn borer survey documented a state average of only 0.03 borer per plant or 3 per 100 plants, the second lowest population in the last 76 years.

BLACK CUTWORM: Gusty south winds from May 3-9 brought additional large flights of black cutworms northward into the state following last week's first significant migration. DATCP's 46 monitoring locations collected 483 moths, with 18 sites registering intense captures of nine or more moths in two nights. The highest trap count for the week was 48 moths near Platteville in Grant County. Pheromone traps captured 220 moths during the previous week, for a cumulative total of 713 specimens since April 12. The moderate to high moth

numbers recorded in the last two weeks signal that the risk of black cutworm damage to emerging corn has increased. The map below summarizes recent trap counts.

Black Cutworm Counts May 3-9, 2018



Wisconsin Department of Agriculture, Trade and Consumer Protection 

SEEDCORN MAGGOT: Emergence of first-generation flies from overwintered pupae has peaked across the southern and west-central areas of the state with the accumulation of 360 degree days (sine base 39°F). Peak emergence is expected to occur next week from Stevens Point to Green Bay and northward. Heavy egg laying is likely during this time, increasing the risk of maggot damage to susceptible crops such as corn and soybean seeds and seedlings. Planting as close as possible to the ‘fly-free’ period between the first and second generations can reduce risk and is the primary cultural control for this spring soil insect pest.

SOYBEANS

BEAN LEAF BEETLE: The first beetles were collected from Richland County alfalfa on May 7. The spring appearance of this insect indicates soybeans emerging in the next 2-3 weeks will be highly attractive to overwintered beetles and should be checked shortly after

emergence for feeding injury to the cotyledons, stems, and unifoliate leaves.



Bean leaf beetle

Krista Hamilton DATCP

FRUITS

GRAPE FLEA BEETLE: The spring migration of adults from hibernation sites to grapevines began about two weeks ago. Scouting twice weekly is suggested beginning at the bud swell stage and continuing until shoot growth has reached three inches, or through late May. Feeding by the overwintered adults can stunt shoot growth and cause yield loss. Plants in the border rows of vineyards are at heightened risk of damage by the migrating beetles. Treatment is justified if more than 5% of buds are damaged.



Grape flea beetle

ohiograpeweb.cfaes.ohio-state.edu

SPOTTED TENTIFORM LEAFMINER: Peak emergence of first brood moths is approaching in southern and central

Wisconsin. Cooperator apple orchards in Iowa, Marquette and Racine counties reported high counts of 825-1,025 moths per trap in the past week. Counts elsewhere varied widely from 1-558 per trap. The number of moths captured during the period defined as a “peak flight” is usually in the range of 800-1,200 per trap per week for orchards with a typical STLM population.



Spotted tentiform leafminer

Charles Baker ukmoths.org.uk

EASTERN TENT CATERPILLAR: Larvae have been active since April 24 and their 2- to 3-inch tents are becoming noticeable on apple, ornamental crabapple and wild cherry trees. Removal of the small tents by hand or with a tool during the next two weeks will prove most effective in reducing defoliation.



Eastern tent caterpillar

minnesotaseasons.com

GREEN FRUITWORM: Apple growers planning to apply a Bt product (i.e., Agree, Deliver, Dipel) between tight cluster and bloom for control of green fruitworm or other leaf-feeding caterpillars are reminded that most form-

ulations persist on foliage for only a few days following application. Because Bt must be ingested by larvae to be lethal, it is imperative to confirm the presence of caterpillars through scouting terminals and blossoms and treat only if temperatures are warm enough for their activity. Post-treatment scouting for larvae is recommended to determine if a second application is needed. The effectiveness of Bt diminishes at petal fall as feeding by most early-spring caterpillar pests subsides.

REDBANDED LEAFROLLER: Moth activity accelerated from May 3-9, with counts ranging from 2-188 RBLR per trap. Peak flight activity, and corresponding high trap counts, has likely occurred in southern and central orchards. The first RBLR caterpillars generally appear around petal fall.

VEGETABLES

COMMON ASPARAGUS BEETLE: Beetle emergence and egg deposition on asparagus spears have begun near Janesville, La Crosse, and Platteville. Plants should be examined for adults and eggs on warm, sunny afternoons when the beetles are most active. Control may be warranted if 5-10 beetles are found per 100 spears, or eggs are present on at least two of 100 of spears, ferns, or flower buds. Eliminating the adults early in spring, before significant egg laying has occurred, is the most effective management strategy.



Common asparagus beetle

www.planetnatural.com

FLEA BEETLES: Spinach, chard, kale and other early-seeded and transplanted leafy vegetables should be inspected every 1-2 days during the two weeks after emergence (or transplant date), when young plants are

most susceptible to flea beetle damage. A soil insecticide application or another form of chemical control may be justified for commercial fields if floating row covers or other cultural controls have failed to prevent beetles from moving onto newly planted crops. Established control thresholds vary by crop, but start at two beetles per plant for tomatoes and eggplant less than three inches. For cole crops and horseradish, control should be considered when the beetles cause stand reduction on small plants.



Flea beetles feeding on cauliflower

www.omafra.gov.on.ca

CABBAGE MAGGOT: Peak emergence of first generation flies can be anticipated in the next week across southern and west-central Wisconsin. This event occurs around 300 degree days (simple base 43°F), as lilacs are in full bloom.



Cabbage maggot flies on yellow sticky trap

UMass Extension

Seedlings, transplants, or spring root crops present around the time of peak flights should be protected with row covers installed well before adults begin to emerge.

Producers can also monitor fly populations with yellow sticky traps or yellow plastic bowls filled with soapy water placed at 100-foot intervals along field edges and inspected every 4-6 days to determine if fly populations are increasing or declining. Broccoli and cauliflower plantings on light sandy soils are at highest risk of maggot infestation and should be monitored closely for signs of injury. Transplanting cole crops one week before or after peak fly emergence is recommended to avoid the primary damage period.

NURSERY & FOREST

VOLUTELLA BLIGHT: This destructive disease of pachysandra was found on the cultivar 'Green Carpet' in a Racine County greenhouse. Symptoms include stem cankers and circular necrotic leaf spots that gradually increase in size until the entire leaf turns brown or black and dies. An opportunistic pathogen, *Volutella* blight infects plants weakened by abiotic or biotic factors, such as moisture stress or scale insects. Management includes sanitary, cultural, and chemical measures like removal of debris and diseased plants, growth and vigor maintenance of plants, and/or possibly the application of approved fungicides.



Volutella blight on pachysandra

Shanon Hankin DATCP

WINTER INJURY: After a long, cold winter season, many conifers and broad-leaved evergreens throughout the state are showing reddening of needles caused by winter burn, winter desiccation, or both. Symptoms of the former appear in response to rapid temperature fluctuations in late winter and early spring, while the latter develops when moisture lost through transpiration cannot be replaced due to frozen soil, resulting in dehydration. Foliar

discoloration is typically more severe on southern and western exposures which receive more direct sunlight. Damage is usually restricted to the needles and not the buds and often resolves by early summer. Pruning out affected branches should be postponed until new growth emerges later this month or in June. Irrigation is also recommended for trees affected by winter desiccation.



Winter injury on yew shrubs

Krista Hamilton DATCP

WHITE PINE WEEVIL: The vibrant yellow blooms of the forsythia shrub are a phenological indicator of white pine weevil emergence and can be used to time scouting and control measures. Soon after the distinctive yellow flowers appear in spring, the adult white pine weevil resumes feeding and laying eggs on the terminal shoots of pines and spruce.



Yellow forsythia in bloom

flowerpicturegallery.com

egg hatch (before larvae tunnel into the shoots), growers are urged to closely inspect their trees in the next two weeks for signs of activity. In areas where the treatment interval has passed, removal of wilted leaders should be planned for June or July.

Adult white pine weevils are one of the earliest pests to resume activity each spring, requiring just 7-58 degree days (simple base 50°F) before emerging from overwintering sites.

PLANT VIRUSES: Nursery inspectors again observed a variety of greenhouse plants infected with viruses in the past week. The Astilbe varieties 'Ellie,' 'Look At Me,' and 'Younique Salmon' tested positive for tobacco rattle virus, as did Epimedium 'Rose Queen.' Iris 'Chasing Rainbows,' 'Edith Wolford,' 'Immortality,' 'Lenora Pearl,' 'Maid of Orange,' 'Sangria,' and 'Stellar Lights' were infected with potyvirus. Virus symptoms were also observed on fig, horseradish, hosta 'Spartacus,' and sedum 'Mr. Goodbud.'

Viruses are highly transmissible through routine greenhouse operations and have become increasingly prevalent in the nursery trade. There are currently no controls for plants infected with viruses. Once plants are diagnosed with any virus, they must be removed promptly from the growing area and destroyed.



Virus symptoms on sedum

Shanon Hankin DATCP

The presence of weevils and oviposition holes suggests egg hatch is imminent and treatments should be initiated promptly. Since insecticides are most effective prior to

APPLE INSECT & BLACK LIGHT TRAP COUNTS MAY 3 - 9

| COUNTY | SITE | STLM ¹ | RBLR ² | CM ³ | OBLR ⁴ | DWB ⁵ | LPTB ⁶ | BMSB ⁷ | AM RED ⁸ | YELLOW ⁹ |
|-------------|---------------|-------------------|-------------------|-----------------|-------------------|------------------|-------------------|-------------------|---------------------|---------------------|
| Bayfield | Keystone | 0 | 0 | | | | | | | |
| Bayfield | Orienta | 0 | 0 | | | | | | | |
| Brown | Oneida | 50 | 44 | | | | | | | |
| Columbia | Rio | — | — | | | | | | | |
| Crawford | Gays Mills | — | — | | | | | | | |
| Dane | DeForest | — | — | | | | | | | |
| Dane | Mt. Horeb | 50 | 177 | 0 | | | | | | |
| Dane | Stoughton | 61 | 95 | | | | | | | |
| Fond du Lac | Campbellsport | 22 | 36 | 0 | | | | | | |
| Fond du Lac | Malone | 7 | 27 | | | | | | | |
| Fond du Lac | Rosendale | 6 | 31 | 0 | | | 0 | | | |
| Grant | Sinsinawa | 11 | 102 | 0 | 8 | | | | | |
| Green | Brodhead | — | — | | | | | | | |
| Iowa | Mineral Point | 825 | 85 | | | | | | | |
| Jackson | Hixton | 420 | 124 | 0 | | | | | | |
| Kenosha | Burlington | 430 | 70 | | | | | | | |
| Marathon | Edgar | 124 | 30 | | | | 0 | | | |
| Marinette | Niagara | 0 | 17 | | | | 0 | | | |
| Marquette | Montello | 892 | 188 | 0 | | | 0 | | | |
| Ozaukee | Mequon | 20 | 133 | | | | 0 | | | |
| Pierce | Beldenville | 81 | 64 | 0 | | | | | | |
| Pierce | Spring Valley | 28 | 49 | | | | | | | |
| Racine | Raymond | — | — | | | | | | | |
| Racine | Rochester | 1025 | 158 | | | | | | | |
| Richland | Hill Point | 87 | 102 | | | | 0 | | | |
| Sheboygan | Plymouth | 558 | 135 | | | | 0 | | | |
| Walworth | East Troy | — | — | | | | | | | |
| Walworth | Elkhorn | — | — | | | | | | | |
| Waukesha | New Berlin | — | — | | | | | | | |

¹Spotted tentiform leafminer; ²Redbanded leafroller; ³Codling moth; ⁴Obliquebanded leafroller; ⁵Lesser peachtree borer; ⁶Dogwood borer; ⁷Brown marmorated stink bug; ⁸Apple maggot red ball; *Unbaited; **Baited; ⁹Apple maggot yellow board.

| COUNTY | SITE | BCW ¹ | CEL ² | CE ³ | DCW ⁴ | ECB ⁵ | FORL ⁶ | SCW ⁷ | TA ⁸ | VCW ⁹ | WBC ¹⁰ |
|-------------|------------------|------------------|------------------|-----------------|------------------|------------------|-------------------|------------------|-----------------|------------------|-------------------|
| Columbia | Arlington | — | — | — | — | — | — | — | — | — | — |
| Columbia | Pardeeville | — | — | — | — | — | — | — | — | — | — |
| Dodge | Beaver Dam | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| Fond du Lac | Ripon | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Grant | Prairie du Chien | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Manitowoc | Manitowoc | — | — | — | — | — | — | — | — | — | — |
| Marathon | Wausau | — | — | — | — | — | — | — | — | — | — |
| Monroe | Sparta | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Rock | Janesville | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 0 | 0 |
| Walworth | East Troy | — | — | — | — | — | — | — | — | — | — |
| Wood | Marshfield | — | — | — | — | — | — | — | — | — | — |

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