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# 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

Spring weather conditions finally moderated in the last week after a record-setting cold and wet start to the growing season. A high pressure system accompanied by southerly winds brought the first consecutive mild, sunny days of the year to the state and temperatures soared into the 70s and upper 80s before unseasonably cold, snowy conditions returned for the latter half of the week. At the beginning of May, spring tillage is proceeding at the slowest pace in the last 30 years, with only 4% complete. Planting has been delayed by as much as 2-3 weeks and other fieldwork has scarcely begun. Meanwhile, alfalfa and winter wheat remain dormant in the north, and soils are highly saturated or still frozen in some areas. The latest round of wintry weather has only further delayed the start of the growing season. Minimal insect activity is expected until spring temperatures return next week.

## LOOKING AHEAD

BLACK CUTWORM: The placement of traps was completed by mid-April at 30 locations in the southwest and south-central counties. Seventy-six moths have been reported since the first migrants were registered near Janesville in Rock County on April 15. Reports from other Midwestern states also confirm the start of the long-range, northward migration of moths from the southern U.S. during the week of April 15-22. No significant flights into Wisconsin have occurred as of May 1.

EASTERN TENT CATERPILLAR: Overwintered eggs began hatching by April 26 in Grant County, following the accumulation of 50 degree days (base 50°F). The first tents should appear in the next 1-2 weeks on wild cherry, apple, flowering crabapple and other host trees. Control is advised while the larvae and tents are still small.

PLUM CURCULIO: The spring migration from wooded areas into orchards may have started during the brief period of warm weather in the past week. Significant activity is unlikely to resume until temperatures increase, but apple growers should set traps in the week ahead and be prepared to check orchard perimeters and early blooming varieties for evidence of this pest.

EMERALD ASH BORER: Preventative treatment of ash trees should begin at this time. The optimal timing for soil injections and drench insecticide applications is between mid-April and mid-May to allow 4-6 weeks for the material to be translocated throughout the vascular tissues of the tree before larvae establish. Trunk-injected products should not be applied until after ash tree foliage has expanded, but prior to egg hatch. Treatment is recommended only for healthy, high-value ash trees within 15 miles of a known infestation or within a quarantined area.

GYPSY MOTH: Larval emergence from overwintered eggs is predicted for May 5-9 in southern Wisconsin. This event occurred by April 2 last year, April 26 in 2011, and is about two weeks behind normal this season. Aerial spraying directed against first and second-instar larvae could be delayed until the week of May 24-27, which would be one of the latest start dates in the 34-year history of the Wisconsin Gypsy Moth Program.

TRUE ARMYWORM: The first moths of the season were collected near Janesville in the last week. Minimal activity was reported, with only five adults appearing in the black light trap from April 29-May 1. Similar to the black cutworm, the principal factor influencing true armyworm populations at this time of year is the frequency of southerly storm events that carry migrants into the state. The recent counts from Janesville suggest a minor flight has occurred.

*True armyworm moth* *freepages.misc.rootsweb.com*

## FORAGES

ALFALFA PESTS: Surveys in alfalfa have not yet started. Most of the state's alfalfa acreage remains dormant or too short to sweep. Sampling for alfalfa weevil adults and other early-season alfalfa pests is planned for next week if the weather improves.

PEA APHID: The degree day accumulation above base 40°F is appropriate for hatching of overwintered eggs. Pea aphids were first observed last season on March 19 and are usually active by mid- to late April. This insect is of primary concern in early spring as alfalfa stands are becoming established and about the time first crop hay is harvested.

## DEGREE DAYS JANUARY 1 - MAY 1

| LOCATION | 50°F | 2012 | NORM | 48°F | 40°F |
|---|---|---|---|---|---|
| Dubuque, IA | 128 | 399 | 226 | 122 | 280 |
| Lone Rock | 108 | 405 | — | 94 | 247 |
| Beloit | 153 | 412 | 231 | 135 | 317 |
| Madison | 108 | 379 | 214 | 96 | 245 |
| Sullivan | 125 | 378 | 196 | 110 | 271 |
| Juneau | 98 | 350 | — | 98 | 231 |
| Waukesha | 101 | 301 | — | 97 | 233 |
| Hartford | 88 | 293 | — | 87 | 211 |
| Racine | 94 | 266 | — | 92 | 225 |
| Milwaukee | 84 | 256 | 166 | 83 | 205 |
| Appleton | 76 | 283 | 163 | 76 | 174 |
| Green Bay | 60 | 231 | 152 | 61 | 159 |
| Big Flats | 74 | 348 | — | 73 | 181 |
| Hancock | 79 | 332 | 201 | 78 | 181 |
| Port Edwards | 66 | 320 | 198 | 65 | 150 |
| La Crosse | 75 | 371 | 236 | 77 | 188 |
| Eau Claire | 64 | 309 | 197 | 65 | 141 |
| Cumberland | 55 | 253 | 158 | 53 | 115 |
| Bayfield | 39 | 157 | — | 34 | 94 |
| Wausau | 58 | 263 | 161 | 56 | 120 |
| Medford | 55 | 258 | 136 | 55 | 112 |
| Crivitz | 51 | 203 | — | 51 | 133 |
| Crandon | 50 | 207 | 123 | 47 | 106 |

*Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2013. NORMALS based on 30-year average daily temps, 1981-2010.*

## CORN

BLACK CUTWORM: Moths arrived in the state three weeks ago, first appearing near Janesville in Rock County on April 15. Counts since then have been low and no significant migration has been noted. The 2013 monitoring network consisting of 30 traps in Columbia, Dane, Dodge, Grant, Iowa, Jefferson, Lafayette, Monroe and Rock counties and has thus far registered a cumulative total of 76 moths. Projected corn cutting dates will be determined once the first sustained capture of nine or more moths in two nights is documented.

CORN ROOTWORM: Results of the annual beetle survey conducted last August indicate a high potential for larval root injury to corn in southern Wisconsin in 2013. More than a quarter of the 229 corn fields sampled last year had counts that met the treatment criteria of 0.75 beetle per plant, many of which were distributed in the southern three crop reporting districts. Beetle counts

in the northern districts increased markedly from 2011 levels but were still below average, so fewer problems are anticipated in those areas.

SEEDCORN MAGGOT: Corn establishment problems due to this soil pest are probable for some areas of the state this spring if cool, wet weather persists. Outbreaks of seedcorn maggot are occasional but occur in years when seed germination and emergence are delayed by low temperatures and wet soils, allowing the subterranean maggots to feed longer. Failure of seedlings to emerge is usually the first sign of maggot infestation.

Seedcorn maggot fly Guillaume Jacquemin www.galerie-insecte.org

## FRUITS

SPOTTED TENTIFORM LEAFMINER: The first of three flights expected this season began by April 26 in southern Wisconsin. Several cooperating apple orchards reported a few moths in the past week, but counts remain very low. Peak emergence of first brood adults could occur at advanced sites in the next two weeks if degree day accumulations surpass 150 (base 50°F).

REDBANDED LEAFROLLER: Moths are appearing in pheromone traps across the south. Counts have been below 28 per trap and the first peak flight has not yet been noted.

SPOTTED WING DROSOPHILA: A study to determine the overwintering status of spotted wing drosophila (SWD) began on April 1. Twenty fruit growers in 17 counties are participating in the UW-Madison-developed survey, which should determine if this newly introduced, invasive pest overwinters locally or migrates to the state from the southern U.S. Last August, SWD emerged in unprecedented numbers and the larvae caused extensive damage to blackberry and raspberry crops in all areas of the state. It remains unclear if this was an anomaly or if SWD will continue to threaten berries and other small fruits prior to harvest. The known distribution of SWD in the state includes the counties of Bayfield, Brown, Crawford, Dane, Door, Fond du Lac, Kewaunee, Manitowoc, Marinette, Monroe, Pierce, Racine, Vernon, Winnebago and Wood, for a total of 15 confirmed counties since it was first identified in Wisconsin in 2010.

## VEGETABLES

FLEA BEETLES: Growers of early-planted and transplanted leafy vegetables such as spinach and leafy greens are advised to take measures soon to prevent or delay flea beetle invasion of spring crops. Most flea beetle damage is inflicted in the first two weeks post-emergence, so plants should be inspected every 1-2 days during this period of susceptibility.

Adjusting planting dates, enclosing seed beds with floating row covers, and eliminating weed hosts are all strategies to reduce flea beetle problems. Planting a mustard trap crop (1% of total acreage) 7-14 days in advance of the primary crop is another option, although research on trap cropping has produced mixed results.

COMMON ASPARAGUS BEETLE: The phenology model for this asparagus pest forecasts the first appearance of adults from 150-240 degree days (base 50°F). The lower range of this threshold will be surpassed next week across much of southern Wisconsin.

Common asparagus beetle DavidH-J flickr.com

# NURSERY & FOREST

CONIFER WINTER INJURY: After last year's drought, arborvitae, fir, pine, spruce, yew and other conifers throughout the state are showing reddening and browning of needles caused by winter burn, winter drying or a combination of the two. Symptoms of the former appear in response to rapid temperature fluctuations in late winter and early spring, while the latter develops whenever soil freezes and winter winds draw moisture from plants. Damage is generally more prevalent on southern and western exposures. Winter injury is an abiotic disorder that should not be mistaken for infectious disease. Symptoms are usually temporary and resolve by early summer.

NURSERY INSPECTION: Early-season greenhouse inspections have been conducted in Brown, Chippewa, Eau Claire, Kewaunee, Pierce, Racine and Waukesha counties. The most common arthropod pests encountered were aphids, fungus gnats, shoreflies, spider mites and thrips. Diseases observed were hosta virus (HVX) on 'Blue Angel', 'Gold Standard', 'Guacamole', 'Sunshine Glory', 'Whirlwind' and 'Winter Snow' and tobacco rattle virus (TRV) on alcea, astilbe, delphinium, dicentra, epimedium, lobelia, pachysandra and phlox. Both HVX and TRV have become very common viral diseases in the nursery trade.

*Tobacco rattle virus symptoms on Dicentra* *Liz Meils DATCP*

IMPATIENS DOWNY MILDEW: This disease of impatiens has been diagnosed by the UW-Madison Plant Disease Diagnostic Clinic from samples collected earlier this spring in a Monroe County greenhouse. Last season, impatiens downy mildew (IDM) became widespread in U.S. greenhouses and landscape settings, with Wisconsin and more than 30 other states reporting cases. To reduce IDM problems this year, commercial growers of impatiens are advised to inspect and cull plants with light green stippled leaves, curled leaves, or the characteristic white, downy mycelia growth on the undersides of foliage. Home gardeners should also carefully examine impatiens for symptoms before purchasing flowers, and consider planting the mildew-resistant New Guinea impatiens or a New Guinea hybrid.

*Leaf underside with white downy growth* *Laura Sanagorski UF-Extension*

BOTRYTIS BLIGHT: This gray mold disease of ornamental plants was observed on New Guinea impatiens in Brown and Kewaunee counties. Botrytis development is likely the result of growers holding plants too long due to cold weather and a late spring. Maintaining relative humidity levels below 85% and increasing air circulation to keep leaf surfaces dry should reduce its occurrence. Infected plants must be treated with a protective fungicide or removed from the greenhouse.

GYPSY MOTH: Early May is an appropriate time to implement controls to reduce summer gypsy moth defoliation. Control options include removing or treating egg masses with horticultural oil or placing sticky barrier bands on trees to prevent the larvae from accessing the canopy. Horticultural oils that suffocate the eggs can be purchased at garden centers and large retailers and should be applied at temperatures above 40°F, when freezing is not imminent. Egg masses within reach may be scraped into a bucket of soapy water and soaked for 2-3 days before being discarded. Property owners considering insecticide treatments should consult an arborist or tree service in the immediate future.

# APPLE INSECT & BLACK LIGHT TRAP COUNTS APRIL 25 - MAY 1

| COUNTY | SITE | STLM[1] | RBLR[2] | CM[3] | OBLR[4] | AM RED[5] | YELLOW[6] |
|---|---|---|---|---|---|---|---|
| Bayfield | Keystone | | | | | | |
| Bayfield | Orienta | | | | | | |
| Brown | Oneida | | | | | | |
| Chippewa | Chippewa Falls | | | | | | |
| Dane | Deerfield | | | | | | |
| Dane | McFarland | | | | | | |
| Dane | Mt. Horeb | 0 | 4 | | | | |
| Dane | Stoughton | 0 | 1 | | | | |
| Dodge | Brownsville | | | | | | |
| Fond du Lac | Campbellsport | 0 | 1 | | | | |
| Fond du Lac | Malone | 0 | 1 | | | | |
| Fond du Lac | Rosendale | 0 | 0 | | | | |
| Grant | Sinsinawa | 6 | 28 | | | | |
| Green | Brodhead | 1 | 6 | | | | |
| Iowa | Mineral Point | 2 | 13 | | | | |
| Jackson | Hixton | | | | | | |
| Kenosha | Burlington | 5 | 2 | | | | |
| Marathon | Edgar | | | | | | |
| Marinette | Niagara | | | | | | |
| Marquette | Montello | 0 | 1 | | | | |
| Ozaukee | Mequon | | | | | | |
| Pierce | Beldenville | | | | | | |
| Pierce | Spring Valley | | | | | | |
| Polk | Turtle Lake | | | | | | |
| Racine | Raymond | 0 | 0 | | | | |
| Racine | Rochester | *22 | *11 | | | | |
| Richland | Hillpoint | 1 | 5 | | | | |
| Walworth | East Troy | | | | | | |
| Walworth | Elkhorn | | | | | | |
| Waukesha | New Berlin | 3 | 0 | | | | |

[1]Spotted tentiform leafminer; [2]Redbanded leafroller; [3]Codling moth; [4]Obliquebanded leafroller; [5]Apple maggot red ball; *Unbaited AM trap; **Baited AM trap; [6]Apple maggot yellow board; *Counts represent a two-day monitoring period.

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

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