

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

Brisk, occasionally rainy weather continued for a second week, slowing crop emergence and development. Below-normal temperatures prevailed and another late-season frost occurred across northern Wisconsin, where overnight lows on May 19 plummeted to the lower 20s and 30s. Northeast winds around 10 mph kept high temperatures on Tuesday in the lower to mid-50s across the state. Unseasonably cool conditions persisted through mid-week before milder weather returned, allowing planting of the last acres of oats and potatoes to proceed between rain showers. After a period of rapid planting earlier this month, over 85% of this year's intended corn acres have been sown, 51 percentage points ahead of last year and 32 points ahead of the five-year average. Statewide, more than 41% of the corn crop has emerged. Soybean planting advanced 25 points during the previous week to 50% complete, the second highest percent by mid-May in more than 35 years.

LOOKING AHEAD

BLACK CUTWORM: Development of this insect has slowed in response to recent cold temperatures. Migrants continued to arrive in low numbers and oviposition is expected to increase with warmer weather ahead. Early signs of cutworm infestation should become apparent

next week in emerging corn. Larvae thrive best in reduced tillage and no-tillage fields, especially those with previous winter annual weed infestations, which is where growers and consultants are advised to scout for evidence of cutworm feeding.

ALFALFA WEEVIL: Larvae are appearing in low numbers in southern and central Wisconsin alfalfa. Regular scouting to assess leaf feeding damage should continue through first harvest and early second-crop regrowth. A defoliation level of 40% of stems with weevil feeding in the first crop signals the larval population is high and an early harvest would be beneficial.

PLUM CURCULIO: Cool weather this week delayed weevil migration into orchard perimeter trees, but the first adults and oviposition scars can be anticipated soon in orchards where petal fall has occurred. Apple growers are advised to examine early-season cultivars for the crescent-shaped scars indicative of plum curculio egg laying. Control treatments are generally directed against the adults to prevent oviposition.

CODLING MOTH: Emergence of the first spring moths continued, despite low temperatures. A few monitoring locations reported counts of 1-8 moths, but biofix was not established since captures did not occur on consecutive nights. The exception was near Malone in Fond du Lac County where traps registered very high counts of 21-25

moths on May 16-17. Daily monitoring of pheromone traps is strongly recommended in the week ahead or until biofix has been determined.

EUROPEAN CORN BORER: Degree day accumulations near Beloit, La Crosse, Lone Rock and Platteville are well beyond the 374 units (modified base 50°F) required for the spring flight to begin, though significant moth activity is unlikely until warmer nightly temperatures return. Black light trap contents should be closely examined during the next two weeks for early moths.



European corn borer moth

www.sequella.co.uk

DEGREE DAYS JANUARY 1 - MAY 20

LOCATION	50°F	2014	NORM	48°F	40°F
Dubuque, IA	463	313	421	457	773
Lone Rock	438	270	—	429	718
Beloit	448	330	429	442	756
Sullivan	301	202	377	291	535
Madison	418	261	401	409	688
Juneau	355	212	—	349	603
Racine	258	192	—	255	498
Waukesha	301	202	—	291	535
Milwaukee	261	186	316	255	496
Hartford	301	202	—	291	535
Appleton	316	160	—	309	557
Green Bay	255	133	313	262	496
Big Flats	398	219	—	374	600
Hancock	398	219	390	374	600
Port Edwards	378	194	378	355	594
La Crosse	451	248	447	449	757
Eau Claire	374	191	387	367	640
Cumberland	319	138	330	291	517
Bayfield	219	66	—	190	331
Wausau	308	138	327	290	498
Medford	297	131	287	276	484
Crivitz	237	113	—	224	424
Crandon	258	103	263	230	394

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

FORAGES & GRAINS

ALFALFA WEEVIL: Larval counts in the southern half of the state continue to be low. Alfalfa surveyed in Columbia, Dane, Dodge, Green, Iowa, Jefferson, La Crosse, Rock and Sauk counties contained only 1-23 weevils per 100 sweeps, and 39% of fields sampled still had no apparent larval population. Based on the low number of larvae collected and the fact that alfalfa harvest has started, significant damage should not develop before most first-crop alfalfa is cut, except in rare fields or if harvest is postponed beyond the first week of June. Routine sampling for larvae and leaf tip feeding should be under way and continue through harvest or until the weevil season has passed.

PEA APHID: Densities varied from 0.1-4.5 aphids per sweep and averaged 1.5 per sweep, which is a marked increase from last week's average of 0.5 per sweep. The appearance of winged females, an indicator of imminent dispersal from alfalfa into nearby pea and vegetable fields, was noted in several fields.

POTATO LEAFHOPPER: Migrants are distributed in low numbers across the southern half of the state. The average count from May 14-20 was less than one leafhopper per 100 sweeps, with a high count of four per 100 sweeps found near Baraboo in Sauk County.

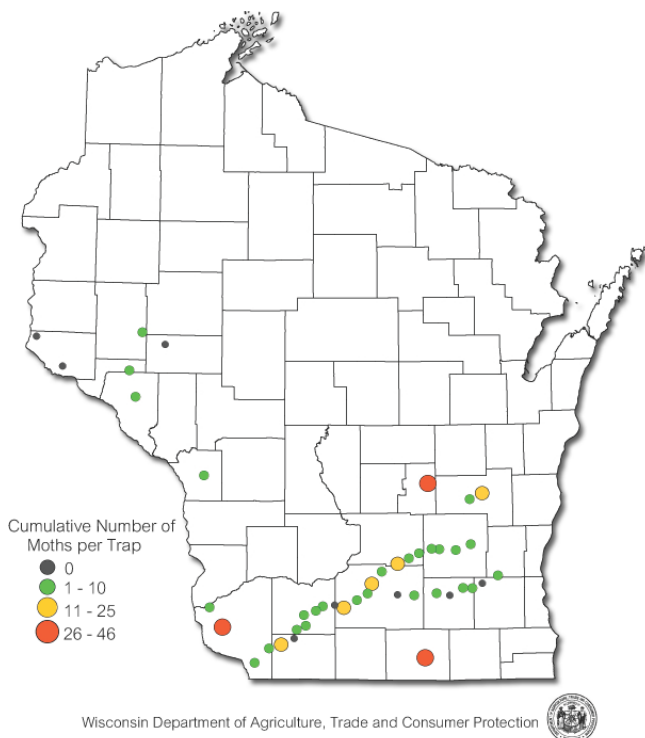
PLANT BUG: Nymphs of both the alfalfa and tarnished plant bug were collected from alfalfa for the first time this week. The tarnished plant bug remains the more numerous of the two species.

WHEAT PESTS: Surveys in 13 wheat fields, two rye fields and one barley field in Dane, Dodge and Fond du Lac counties indicate insect and disease pressure is low. Powdery mildew was observed in five fields, tan spot in four fields and Septoria in one. No rust was detected. Wheat was at flag leaf to early boot stages (Feekes F8-F9). Also found were the English grain aphid and bird cherry-oat aphid, at low levels of 1-3 aphids per plant, in two fields each. Survey observations confirm stem rust is developing on common barberry in Dane County.

CORN

BLACK CUTWORM: Larvae from migrants that arrived in late April are mostly in the second and third instars, and are expected to grow large enough to begin cutting corn plants by May 27. Another flight of 51 moths was documented during the May 14-20 reporting period, signaling that oviposition should intensify as soon as nightly temperatures are conducive to moth activity. Compared to recent years, field conditions this spring are less favorable for outbreaks since tillage is nearly complete statewide and more than 85% of the corn crop has been planted. Fields that have been tilled and planted at the time of black cutworm arrival are generally less attractive as oviposition sites. Further, the annual migration that started on April 1 has to date yielded just 272 moths in 43 traps, or an average of six per trap. This count is substantially lower than the 813 moths that had been collected by this time last year and indicates a lower risk for localized outbreaks this season.

Black Cutworm Counts Spring 2015



EUROPEAN CORN BORER: The degree day model for this insect suggests the first flight is under way and egg deposition is beginning in areas of the state where 450 heat units (modified base 50°F) have accumulated, including Beloit and La Crosse. Temperatures have been too cold for moth flight, thus individuals are not yet

appearing in black light trap collections. The spring flight is expected to accelerate in the week ahead.

TRUE ARMYWORM: Substantial flights of 269 and 102 moths have been registered at the Janesville black light trap location in the last two weeks, indicating a potential for larval infestations in small grains and corn early next month. Reduced tillage corn following sod or a small grains cover crop, and fields with early-season grassy weed pressure are candidates for armyworm problems. Damage usually appears first in the marginal rows of fields, where the larvae enter when moving from another food source.



True armyworm moth

freepages.misc.rootsweb.com

CORN EARWORM: A few early migrants arrived on southerly winds in the last week, as evidenced by the capture of three moths in the Janesville pheromone trap on the night of May 17. These very early moths pose no threat to emerging corn.

SOYBEANS

SOYBEAN APHID: Surveys for aphids in Rock and Sauk counties yielded negative results. Colonization of the earliest emerging soybeans could begin before the end of the month.

BEAN LEAF BEETLE: Overwintered beetles have been found in only two of 75 alfalfa fields sampled this month. The first appearance of this insect was noted on May 11 in Sauk County. The very low number of beetles collected thus far suggests only a minor threat of soybean defoliation in early June. However, the estimated 10% of soybean acres that have emerged as

of May 21 are at increased risk of infestation by overwintered adults and should be checked for evidence of beetle feeding.



Bean leaf beetle

Krista Hamilton DATCP

FRUITS

CODLING MOTH: Eleven of 30 reporting apple orchards captured their first moths from May 15-18, before nighttime temperatures declined to the mid-20s and lower 30s and interrupted the spring flight. Since moths were not trapped on consecutive nights at most locations, the spring biofix was not established. In situations where the start of CM flight is disrupted, Orchard IPM Specialist John Aue recommends disregarding the earliest moths and waiting for the flight to resume to determine an accurate biofix. An exception to this scenario would be in orchards that registered very high counts of 10-20 moths last weekend, which could lead to a significant larval hatch. Pheromone traps should be checked a minimum of every other day over the next 1-2 weeks until biofix is set.

OBLIQUEBANDED LEAFROLLER: Late-instar larvae and rolled leaves were noted this week near Gays Mills in Crawford County, signaling that the first adults are likely to emerge before the end of the month. Most caterpillars in southern and central Wisconsin are in the intermediate to late larval stages at this time.

PLUM CURCULIO: A report from Dane County confirms that the first feeding and oviposition scars are appearing on apples and plums. Inspection of fruits for oviposition scars should be under way in apple orchards beyond petal fall, while sampling for adults using a beating tray

is the preferred method in orchards where tree development is less advanced. Female weevils show a strong preference for early-sizing apples and fruits beyond 10 mm will be most attractive. Organic control options include PyGanic (pyrethrin) applied at dusk to the outer rows and Surround WP (kaolin) on the interior trees. Both materials should be applied on a warm evening since most oviposition occurs at night.

SPOTTED TENTIFORM LEAFMINER: Moth counts are expected to increase by early June as the second flight begins. Numbers this week were mostly low and ranged from 0-450 moths per trap, with an average of 88 per trap. This is the lowest weekly average since the first flight began to gain momentum in late April. The economic threshold for STLM increases from 0.1 to 1.0 mine per leaf for the second generation of sapfeeder larvae.

PLANT BUG: Nymphs are appearing in alfalfa sweep net collections and fruit growers can anticipate more plant bugs migrating to apples, strawberries and other fruit as the harvest of first-crop alfalfa accelerates in the next two weeks. Strawberry plants beginning to bloom should be checked weekly for both adults and nymphs. Controls applied against the small, first and second instar stages are most effective and may eliminate the need for a second treatment. The economic threshold for this insect in strawberries is four per 20 sweeps.



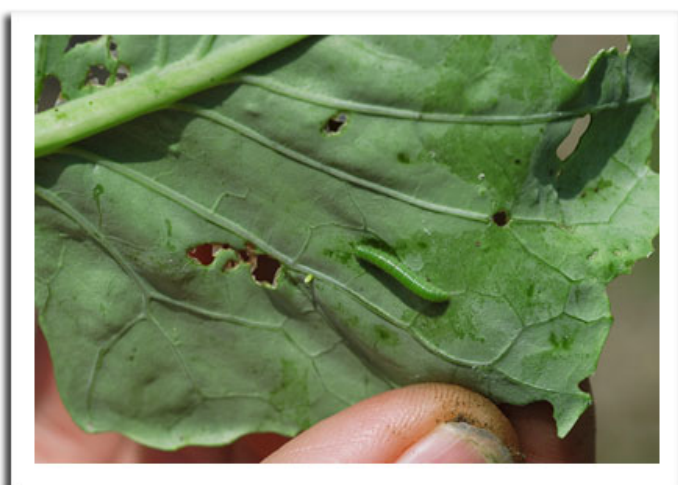
Alfalfa plant bug

fotomie2009 flickr.com

VEGETABLES

IMPORTED CABBAGEWORM: Larvae are emerging in advanced southern areas of the state where 300 degree

days (simple base 50°F) have been surpassed. Cabbageworms chew large, irregular holes in leaves, bore into heads, and drop brown fecal pellets that contaminate the marketed product. Cole crops can tolerate considerable defoliation at the thinning or transplanting stages, but frequent sampling is recommended to assess populations and to avoid insecticide treatments that disrupt biological control. The biological insecticide, *Bacillus thuringiensis* (Bt) is very effective against early-instar caterpillars and is an organically acceptable form of control for infestations affecting 30% or more of plants during the transplant to cupping stages.



Imported cabbageworm larva

UM Extension

ONION MAGGOT: Peak emergence has occurred in the Beloit, La Crosse, Lone Rock and Madison areas of south-central and southwestern Wisconsin and is anticipated next week across central and southeastern counties, following the accumulation of 680 degree days (simple base 40°F). Flies of the spring generation are often the most abundant and damaging, particularly in fields or home gardens where onions are grown in succession. Rotating this year's plantings as far away as possible from last year's onions is perhaps the most basic approach to onion maggot control. Preventative soil insecticides may be considered if maggot damage to the 2014 crop exceeded 5-10%.

NURSERY & FOREST

SPIDER MITE: Minor damage to a variety of ornamentals was observed during greenhouse inspections in Milwaukee, Washington and Vilas counties. Symptoms of mite injury vary according to species and the host plant

infested, but usually include stippling, bronzing, mottling and chlorosis of leaves. The species most commonly found in greenhouse settings are the two-spotted spider mite and cyclamen mite. Control of these mites and others depends heavily upon an understanding of their biology, so distinguishing between mite species is important.

THRIPS: DATCP nursery inspectors noted thrips injury on brachyscome, gerbera, lobelia and tradescantia at garden centers in Milwaukee and Washington counties. Thrips feeding results in stippled, silvery or bleached foliage and, in severe cases, yellowing and leaf drop. Due to their small size, thrips are often difficult to detect until feeding damage has become severe. As with spider mites, control requires accurate identification of the species involved.



Thrips

<http://www.maine.gov/agriculture>

BLACK SPOT ON ROSE: Symptoms of this fungal disease were observed on rose plants at garden centers in Oneida and Vilas counties. Diagnostic features are small, round black spots with feathery margins on the leaf surface that enlarge and cause foliage to turn yellow and drop prematurely. The black spots first appear on expanding lower leaves during wet weather, but eventually spread to the entire plant. Development of this rose disorder is favored by humid, wet conditions and can be alleviated by increasing air circulation and removing infected leaves and fallen debris.

POWDERY MILDEW: Chenille plants at a garden center in Washington County were infected with this very common fungal problem of ornamentals, characterized on most plants by its grayish white powdery dusting on the upper leaves. This disease is favored by high humid-

ity and wet weather. Reducing humidity levels and increasing air circulation will help to alleviate the problem. Fungicidal control is usually not necessary as this disease is largely a cosmetic concern.



Powdery mildew on apple leaves

DATCP Nursery Program

HAIL DAMAGE: Damage from a severe hailstorm last September is now becoming apparent in Sawyer County as evergreen trees break dormancy. Numerous pines, firs, spruces and cedar trees were affected during the event when large hail stones abraded northwest-facing stems and branches, creating small to moderately-sized wounds and injuring conductive tissue. Thinner-barked species such as arborvitae, balsam fir and white pine generally sustained more injury than Colorado blue spruce and other thicker-barked trees.



Hail damage on spruce

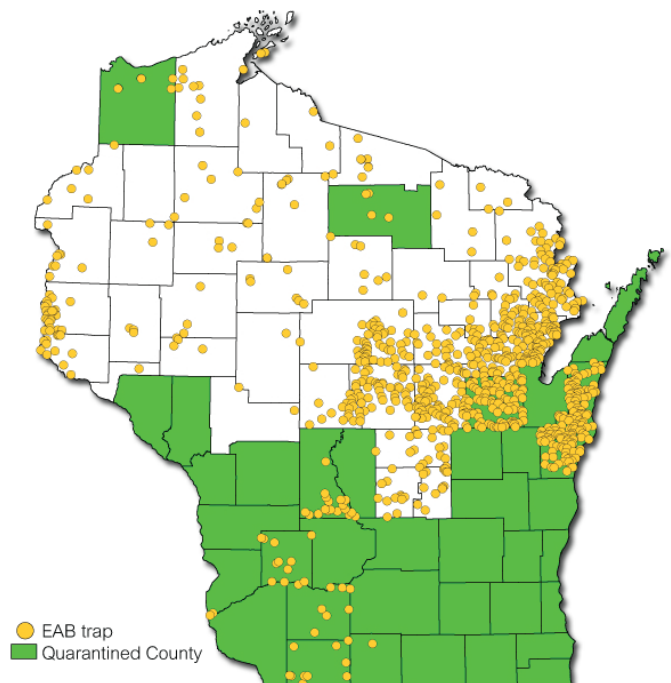
Tim Allen DATCP

Symptoms of hail damage may resemble winter burn, but can be differentiated by abrasions or scars on the upper side of branches and on the side of the trunk facing the

storm. Trees damaged by hail recover slowly and are at increased risk of secondary attack by insects and decay-causing fungi.

EMERALD ASH BORER: The annual EAB trapping survey has started in advance of beetle emergence, which typically begins when the black locust tree is in full bloom, or around 450 growing degree days (base 50°F). Approximately 900 purple traps will be set this year, primarily in the 41 counties where EAB has not yet been found. Survey locations include high-risk sites such as campgrounds, recreation areas, major transportation arteries, firewood dealers and sawmills. The traps are baited with an attractant and coated with a sticky material that lures and captures adult beetles during the 10-week adult flight period.

Emerald Ash Borer Trapping Survey 2015



Wisconsin Department of Agriculture, Trade and Consumer Protection



APPLE INSECT & BLACK LIGHT TRAP COUNTS MAY 14-20

COUNTY	SITE	STLM ¹	RBLR ²	CM ³	OBLR ⁴	APB ⁵	LPTB ⁶
Bayfield	Keystone	12	18	0	0	0	0
Bayfield	Orienta	0	1	0	0	0	0
Brown	Oneida	400	27	4	0	0	0
Clark	Greenwood	10	15	0	4	4	0
Columbia	Rio	5	21	1	0	0	0
Crawford	Gays Mills	40	13	0	0	4	0
Dane	Deerfield	—	—	—	—	—	—
Dane	DeForest	5	36	0	0	3	0
Dane	Edgerton	72	98	2	0	12	0
Dane	McFarland	55	33	—	—	—	—
Dane	Mt. Horeb	0	22	0	0	19	0
Dane	Stoughton	167	32	2	0	0	0
Fond du Lac	Campbellsport	30	21	0	0	0	0
Fond du Lac	Malone	6	1	25	0	0	0
Fond du Lac	Rosendale	55	61	0	0	2	0
Grant	Sinsinawa	0	0	8	0	0	0
Green	Brodhead	6	24	3	0	27	0
Iowa	Mineral Point	54	33	0	0	9	0
Jackson	Hixton	35	6	0	0	0	0
Kenosha	Burlington	95	12	0	0	5	0
Marathon	Edgar	268	85	0	0	0	0
Marinette	Niagara	17	1	0	0	0	0
Marquette	Montello	121	21	1			
Ozaukee	Mequon	149	13	—	—	0	0
Pierce	Beldenville	81	57	0	0	0	0
Pierce	Spring Valley	110	70	0	0	—	—
Racine	Raymond	—	—	—	—	—	—
Racine	Rochester	100	80	3	0	4	1
Richland	Hill Point	450	8	1	0	0	0
Sheboygan	Plymouth	234	62	1	0	3	0
Walworth	East Troy	21	11	0	0	0	1
Walworth	Elkhorn	50	113	0	0	0	1
Waukesha	New Berlin	—	—	—	—	—	—

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	—	—	—	—	—	—	—	—	—	—
Columbia	Pardeeville	1	5	0	0	0	4	0	8	0	0
Crawford	Prairie du Chien	0	0	0	0	0	0	0	0	0	0
Fond du Lac	Ripon	0	0	0	0	0	0	0	17	0	0
Manitowoc	Manitowoc	1	0	0	0	0	1	0	19	0	0
Marathon	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	Sparta	—	—	—	—	—	—	—	—	—	—
Portage	Plover	—	—	—	—	—	—	—	—	—	—
Rock	Janesville	1	4	0	0	0	1	0	102	0	0
Wood	Marshfield	0	1	0	0	0	0	0	1	0	0

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