

# 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, wet and overcast weather continued in Wisconsin, causing further planting delays. Below-normal temperatures prevailed and widespread frost developed across much of the state on May 2, as morning lows fell to the upper 20s and lower 30s. Moderate to heavy rain and snow during the week halted all planting and brought surplus moisture to already saturated ground, and cold conditions persisted through midweek before sunshine and slowly warming temperatures returned. The cool, rainy weather pattern that has predominated since mid-April has led to significant fieldwork delays statewide. Corn planting was only 5% complete by May 3, ten days behind last year and six days behind the five-year average. Planting of oats and potatoes were five and eight days behind average, respectively. Spring tillage and other field operations are expected to resume once temperatures improve next week, though some of the wettest areas will require a sustained period of sunny, warm and dry conditions before the ground is suitable for planting.

## LOOKING AHEAD

**BLACK CUTWORM:** Another substantial supply of moths arrived in Wisconsin this week. Monitoring program traps collected 498 individuals from April 27-May 3, for a total

of 1,534 moths in 45 traps since late March. This is the largest migration documented in several years, and localized infestations are anticipated. Close monitoring of seedling corn and other susceptible crops will be required later this month.

**ALFALFA WEEVIL:** Adults are appearing in alfalfa fields in low numbers and oviposition is increasing. The first small larvae should be detectable next week.

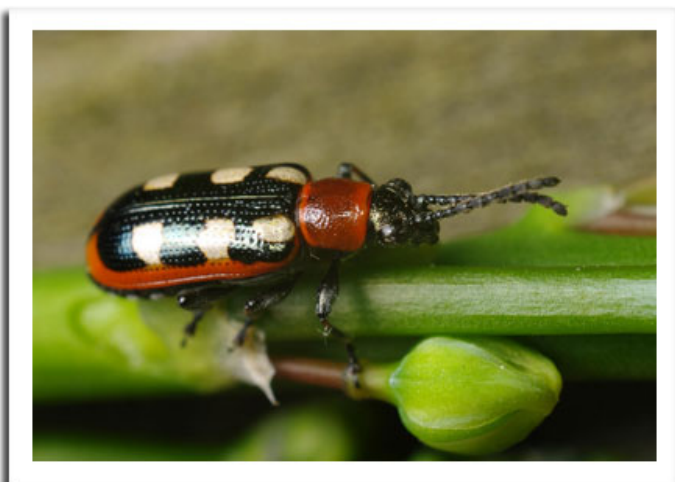
**EUROPEAN CORN BORER:** Pupation is underway in south-central and southwestern Wisconsin. As noted in last week's report, results of 2016 fall abundance survey suggest the overwintered population of larvae is marginally higher than in recent years and may produce a slightly larger first flight of moths later this month. Black light traps should be installed by May 4 in anticipation of the spring flight.

**PLUM CURCULIO:** Migration from hibernation sites into apple orchards could begin at advanced southern sites in the week ahead. A mean daily temperature of 55-60°F for three to four days activates the spring emergence and dispersal of this fruit pest.

**GYPSY MOTH:** Aerial spraying for gypsy moth caterpillars is scheduled to start around May 12 in southern Wisconsin. Fifty-one blocks are slated for treatment in 18 western and central counties this year through DATCP's

Slow the Spread program, and five blocks in Dane and Sauk counties are scheduled to be treated by the DNR’s Suppression program. All treatments are dependent on weather conditions and gypsy moth development. Spraying starts at sunrise, and at most sites, a second application will be made three to seven days after the first application. Additional spray program updates are available at [gypsymoth.wi.gov](http://gypsymoth.wi.gov).

**COMMON ASPARAGUS BEETLE:** Beetles are depositing eggs on asparagus spears near Janesville, Spring Green, and other warmer southern and western locations where 150 degree days (simple base 50°F) have been exceeded. Effective control of this pest requires eliminating the overwintered adults early in the season, before egg laying begins. The optimal scouting and treatment will be during the next two weeks for the southern half of the state. Treatment is justified if 5% of plants are infested with beetles.



Common asparagus beetle

DavidH-J flickr.com

## FORAGES & GRAINS

**ALFLAFA PESTS:** Continuous cold, damp weather during the period of April 27-May 3 prevented DATCP field specialists from conducting routine alfalfa sampling. Below-normal temperatures caused degree-day accumulations to stall late last week, and insect counts are not expected to have changed significantly since the last report. Alfalfa weevil larvae should begin appearing in southern Wisconsin alfalfa fields next week, pea aphid counts historically start escalating by mid-May, and growers can anticipate tarnished plant bugs becoming more common in alfalfa and fruit crops soon. Surveys will resume with warmer temperatures in the week ahead.

## DEGREE DAYS JANUARY 1 - MAY 3

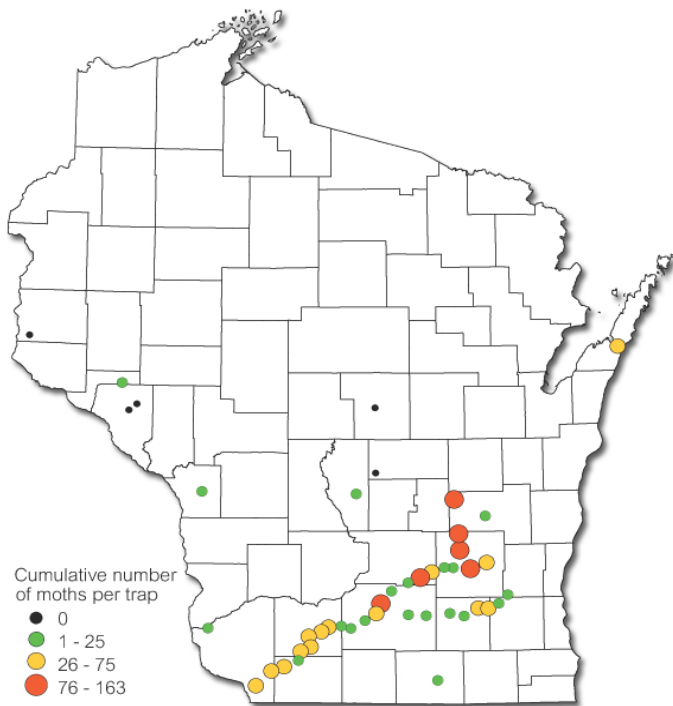
LOCATION	50°F	2016	NORM	40°F
Dubuque, IA	300	247	241	662
Lone Rock	272	227	—	583
Beloit	294	256	247	643
Sullivan	250	162	210	557
Madison	254	203	229	561
Juneau	235	161	—	524
Racine	230	147	—	527
Waukesha	234	162	—	533
Milwaukee	223	138	177	515
Hartford	229	162	—	519
Appleton	168	127	—	414
Green Bay	169	101	165	408
Big Flats	216	190	—	478
Hancock	187	190	215	423
Port Edwards	180	182	212	416
La Crosse	242	247	253	544
Eau Claire	189	211	213	453
Cumberland	107	174	172	324
Bayfield	25	91	—	161
Wausau	133	136	173	353
Medford	113	140	147	333
Crivitz	148	93	—	374
Crandon	101	115	134	302

*Method: Modified B50; Modified B40 as of January 1, 2017. NORMALS based on 30-year average daily temps, 1981-2010.*


## CORN

**BLACK CUTWORM:** Migrants arrived in high numbers for the fourth consecutive week. Pheromone traps registered a total of 498 moths, with a high count of 68 near Ripon in Fond du Lac County. The cumulative total count as of May 3 is 1,534 moths in 45 traps. The abundance of moths entering the state since mid-April signals that higher-than-normal egg deposition is occurring on winter annuals in weedy cornfields. Localized cutworm problems are a distinct possibility three to four weeks from now, especially considering spring tillage is only 21% complete statewide and less than 5% of the corn crop has been planted. Fields that have not been tilled or planted at the time of black cutworm arrival provide preferred habitat for egg laying and are at greater risk of infestation. The start of the primary corn-cutting period is projected for May 21 in Rock County, May 23 in La Crosse County, and May 25 in Portage County.

### Black Cutworm Counts Spring 2017



Cumulative number of moths per trap  
 ● 0  
 ● 1 - 25  
 ● 26 - 75  
 ● 76 - 163

Wisconsin Department of Agriculture, Trade and Consumer Protection 

## FRUITS

**CEDAR-APPLE RUST:** Mature galls on juniper have begun sporulating in southern Wisconsin. The bright orange, gelatinous tendrils that emerge from these galls release spores which can infect apple and related fruit trees as far as 2-3 miles away. On apples, the rust infection period is between tight cluster and first cover, and the majority of infections occur when infected eastern red cedars are within a few hundred yards. Cedar-apple rust alternates between junipers and rosaceous plants, and requires both hosts to complete its life cycle. Removal of the galls before sporulation is recommended to limit spread of the disease to the alternate hosts: apple, crabapple, hawthorn, quince, pear and serviceberry. EBDC fungicides applied during the May rust infection period (tight cluster to first cover) usually provide adequate control in orchards.



Cedar-apple rust gall on juniper

Tracy Schilder DATCP

**TRUE ARMYWORM:** Counts in black light and pheromone traps have been low as of May 3, though higher numbers of armyworms may have arrived along with the black cutworms over the last several weeks. The first moths of the 2017 season were registered at Janesville on the night of April 4, and 77 more specimens have been collected since then. Environmental conditions that favor black cutworm outbreaks (i.e., cold, damp spring weather) are also generally conducive for armyworm activity and development.



True armyworm moth

Krista Hamilton DATCP

**SPOTTED TENTIFORM LEAFMINER:** Moths from the spring flight have been active for four weeks or longer, and peak emergence should occur soon in southern and central orchards. The recommended sampling period for first generation sapfeeder larvae is 10-14 days after a peak capture is recorded. Moth flights were suppressed by low temperatures during the period of April 27-May 3 and pheromone trap counts were mostly very low, ranging from 1-168 per trap. The exception was near Montello in Marquette County where 729 moths were captured.

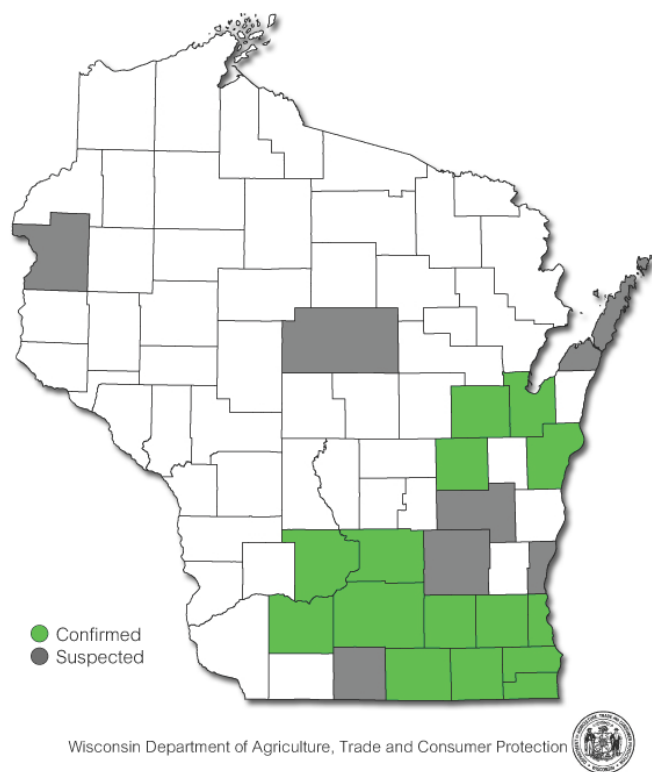
**REDBANDED LEAFROLLER:** Larvae are emerging in locations where 228 degree days (simple base 45°F) have accumulated. This includes advanced parts of



southern and western Wisconsin. The first RBLR caterpillars generally appear around petal fall, which is when scouting should begin.

**BROWN MARMORATED STINK BUG:** Adult specimens have been confirmed by the UW Insect Diagnostic Lab from 34 locations so far this spring, including sites in Dane, Jefferson and Walworth counties. The relatively high number of BMSB reports as of early May suggests that mild winter temperatures favored survival of this new invasive pest. Reproducing populations are established in Dane and Rock counties, and potentially in other parts of south-central and southeastern Wisconsin. Last season marked the first time BMSB was captured in Wisconsin apple orchards. Since the state's first BMSB detection in 2010, specimens have been confirmed from 14 counties. That number is expected to grow in 2017.

### Brown Marmorated Stink Bug Detections Nov 2010 - May 2017



**EASTERN TENT CATERPILLAR:** Eggs were noted to have hatched by March 19 in far southern Wisconsin. The tents or webs have become increasingly noticeable on wild cherry, crabapple and other host trees across the state in the last two weeks, and have been reported in Pierce County apple orchards. Manually removing the tents is advised.

## VEGETABLES

**CABBAGE MAGGOT:** Peak emergence of flies from overwintered pupae theoretically has occurred throughout southern and west-central Wisconsin with the accumulation of 300 degree days (simple base 43°F) as of May 3. Emergence is expected to peak next week across the central counties and by mid-May in the east-central area and northward (north of Appleton and Green Bay). Seedlings, transplants or spring root crops present around the time of peak flights should be protected with row covers or by an insecticide treatment. Insecticides are applied just prior to planting; row covers must be in place 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. Cold soil temperatures and wet fields favor this pest and could contribute to a higher incidence of cabbage maggot problems this spring.



Cabbage maggot flies on yellow sticky trap

UMass Extension

**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](http://www.omafra.gov.on.ca)

**IMPORTED CABBAGEWORM:** Butterflies have been observed around home gardens depositing eggs on cruciferous weeds and cabbage transplants. Close examination of young plants for eggs and small larvae is most important during this oviposition period. Infestation levels in cabbage that exceed 30% during the transplant to cupping development stages may require chemical treatment.



Imported cabbageworm butterfly

[butterfly.ucdavis.edu](http://butterfly.ucdavis.edu)

## NURSERY & FOREST

**ROOT ROT:** Heavy rainfall and cool spring temperatures are ideal conditions for common root water mold and fungal pathogens like *Pythium*, *Phytophthora*, *Rhizoctonia*, and *Fusarium*. Common symptoms include discolored brown or black roots, wilting, and/or stem

dieback. Practicing good sanitation and allowing for drainage in growing medium are the primary safeguards against these pathogens. Application of fungicides may be justified if preventative measures fail.

**LILAC LEAF CHLOROTIC VIRUS:** This virus was recently confirmed by laboratory diagnosis in Wisconsin lilacs after years of uncertainty concerning its identification. Defined by chlorotic leaf spots which coalesce, enlarge, and produce indistinct line patterns, LLCV is closely related to apple mosaic virus (ApMV) and prunus necrotic ringspot virus (PNRSV). Symptoms have been commonly reported on the 'President Grevy' lilac cultivar. LLCV is transmitted by mechanical inoculation and grafting, and not by seed transfer or aphid feeding. Approaches toward the elimination of LLCV and other plant viruses include plant removal and destruction, and replacement with virus-free stock.



Lilac leaf chlorotic virus on lilac

Marcia Wensing DATCP

**NR 40 INVASIVE SPECIES RULE:** Nursery operators and brokers are reminded that the DNR's Chapter NR 40 Invasive Species Rule regulates the transportation, possession, transfer, and introduction of over 245 terrestrial and aquatic species, many of which are commonly used in the nursery trade. Invasive species under this rule are categorized as **restricted** or **prohibited**. Both categories require a permit for transport, possession, transfer, and introduction. Prohibited species additionally require control efforts to prevent or limit their spread, while for restricted species, management is encouraged. There is a phase-out period for plants on the restricted list: three years for herbaceous species and five years for trees and shrubs (effective May 1, 2015). Plants on the prohibited list do not have a phase-out option. It is particularly important for nursery operators

and brokers to become familiar with the invasive plants regulated by Chapter NR40: [http://docs.legis.wisconsin.gov/code/admin\\_code/nr/001/40](http://docs.legis.wisconsin.gov/code/admin_code/nr/001/40)

**EMERALD ASH BORER:** The treatment window for homeowners to apply soil-drench systemic insecticides to protect ash trees from emerald ash borer (EAB) extends only through mid-May. Applications should be made soon to provide adequate lead time for the product to be absorbed by the tree prior to the onset of EAB feeding. Insecticide products available to homeowners must be applied annually and are effective on healthy trees up to 15 inch diameter at breast height (DBH) and with less than 50% canopy decline.



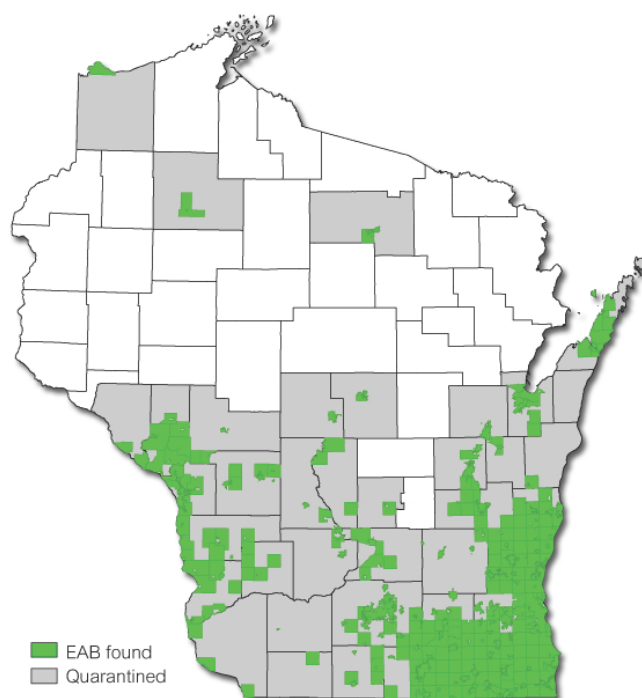
EAB-infested ash trees near Onalaska, WI Krista Hamilton DATCP

Owners of trees larger than 15 inch DBH are advised to consult a certified arborist or tree care specialist to have their ash tree treated with a product suited for mature trees. Professionally-applied products consist of trunk injection or basal bark spray and offer 2-3 years of protection, depending on the active ingredient and local EAB pressure. However, applications of these products should not be made until after leaf expansion, but before recently laid EAB eggs have hatched. The treatment period for professionally-applied materials is generally from mid-May to mid-June.

EAB insecticide treatments should only be considered for healthy, high-value ash trees within 15 miles of an infestation. The 42 Wisconsin counties currently quarantined for EAB are shown in gray in the accompanying map; the 329 EAB-infested municipalities and townships are in green.

**NEW EAB FINDS:** New municipal EAB detections have already increased sharply in 2017, with 55 new reports so far this year. The most recent April detections were in the following 12 municipalities, all located in counties already under quarantine: Adams County (City of Wisconsin Dells); Brown County (Villages of Allouez and Bellevue); Columbia County (City of Wisconsin Dells); Door County (Village of Egg Harbor); Fond du Lac County (Town of Springvale, Village of Rosendale); Jackson County (Towns of Melrose and North Bend); Juneau County (City of Wisconsin Dells); Sauk County (City of Wisconsin Dells); Trempealeau County (Towns of Ettrick, Gale, and Preston); Vernon County (Town of Franklin).

EAB Detections 2008 to May 3, 2017



■ EAB found  
■ Quarantined

Wisconsin Department of Agriculture, Trade and Consumer Protection





## APPLE INSECT & BLACK LIGHT TRAP COUNTS APRIL 27 - MAY 3

COUNTY	SITE	STLM <sup>1</sup>	RBLR <sup>2</sup>	CM <sup>3</sup>	OBLR <sup>4</sup>	OFM <sup>5</sup>	LPTB <sup>6</sup>	DWB <sup>7</sup>	AM RED <sup>8</sup>	YELLOW <sup>9</sup>
Bayfield	Keystone	—	—							
Bayfield	Orienta	1	0							
Brown	Oneida	—	—							
Columbia	Rio	—	—							
Crawford	Gays Mills	—	—							
Dane	DeForest	—	—							
Dane	Edgerton	—	—							
Dane	Mt. Horeb	14	13	0		0				
Dane	Stoughton	14	18							
Fond du Lac	Campbellsport	20	7	0		0				
Fond du Lac	Malone	1	4							
Fond du Lac	Rosendale	63	33	0		0				
Grant	Sinsinawa	6	3							
Green	Brodhead	12	2							
Iowa	Mineral Point	39	1							
Jackson	Hixton	—	—							
Kenosha	Burlington	30	29	0		0				
Marathon	Edgar	9	1							
Marinette	Niagara	—	—							
Marquette	Montello	729	44							
Ozaukee	Mequon	—	—							
Pierce	Beldenville	55	18	0						
Pierce	Spring Valley	12	19							
Racine	Raymond	—	—							
Racine	Rochester	168	23	0						
Richland	Hill Point	2	4	0		0				
Sheboygan	Plymouth	306	40							
Walworth	East Troy	50	44			0				
Walworth	Elkhorn	28	21			0				
Waukesha	New Berlin	—	—							

<sup>1</sup>Spotted tentiform leafminer; <sup>2</sup>Redbanded leafroller; <sup>3</sup>Codling moth; <sup>4</sup>Obliquebanded leafroller; <sup>5</sup>Oriental fruit moth; <sup>6</sup>Lesser peachtree borer; <sup>7</sup>Dogwood borer; <sup>8</sup>Apple maggot red ball; <sup>9</sup>Unbaited; <sup>10</sup>Baited; <sup>11</sup>Apple maggot yellow board.

COUNTY	SITE	BCW <sup>1</sup>	CEL <sup>2</sup>	CE <sup>3</sup>	DCW <sup>4</sup>	ECB <sup>5</sup>	FORL <sup>6</sup>	SCW <sup>7</sup>	TA <sup>8</sup>	VCW <sup>9</sup>	WBC <sup>10</sup>
Columbia	Arlington	—	—	—	—	—	—	—	—	—	—
Columbia	Pardeeville	—	—	—	—	—	—	—	—	—	—
Dodge	Beaver Dam	—	—	—	—	—	—	—	—	—	—
Fond du Lac	Ripon	—	—	—	—	—	—	—	—	—	—
Grant	Prairie du Chien	0	0	0	0	0	0	0	1	0	0
Manitowoc	Manitowoc	—	—	—	—	—	—	—	—	—	—
Marathon	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	Sparta	—	—	—	—	—	—	—	—	—	—
Rock	Janesville	2	0	0	0	0	1	0	19	0	0
Walworth	East Troy	—	—	—	—	—	—	—	—	—	—
Wood	Marshfield	—	—	—	—	—	—	—	—	—	—

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