

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

Considerable rainfall in the last two weeks has produced generally wet field conditions throughout much of the state. Frequent showers and thunderstorms alleviated soil moisture deficits in the north, but also impaired cultivation, planting and other field operations, particularly in the southeast. Despite a few days of unseasonably cool temperatures, the season is now 2-10 days more advanced than last year, but still somewhat behind normal. Crops are progressing well and no unusual insect events have been noted thus far. Emergence of the striped cucumber beetle, flowering of bridal wreath, and full bloom of lilacs all seem to be well correlated this season, although slight suppression of insect activity during the week was attributed to low nighttime temperatures. Warmer weather predicted for early next week should accelerate insect development.

LOOKING AHEAD

PLUM CURCULIO: Adults have not moved into apple orchards in detectable numbers, but warmer temperatures projected for next week may activate their six-week migration period. Early blooming varieties such as 'Gala', 'McIntosh' or 'Paulared' should be examined for evidence of feeding and oviposition in the first 14 days after petal fall.

ALFALFA WEEVIL: Larvae have begun appearing in alfalfa in advanced southern areas of the state. Surveys conducted in Dane, Columbia, Grant, Green and Walworth counties found very low numbers, 3 per 50 sweeps or less in the fields checked. Adults have also become increasingly active in the last week and number as high as 6 per 50 sweeps in a few exceptional fields. Spring egg deposition is intensifying.

EUROPEAN CORN BORER: Pupation began on May 8 near Beloit in Rock County, which is currently one of the more advanced locations in terms of degree days accumulated since January 1. At current temperatures, it is probable that a few moths will appear in black light trap collections by May 22. A very light first flight is anticipated based on the record low state average population of 0.09 larvae per plant previous to the 2008-09 winter.

POTATO LEAFHOPPER: Very low numbers of migrants have been collected from scattered alfalfa fields in Columbia, Dane and Jefferson counties. The first specimen was swept on May 5 in Marquette County. Surveys elsewhere in the central, south-central and southwest failed to reveal any leafhoppers as of May 14, suggesting that few have arrived in the state thus far.

BLACK CUTWORM: Larvae resulting from the spring migration of moths are expected to grow large enough to

begin cutting corn seedlings by May 28. Late-planted corn fields, reduced tillage fields, and fields with previous grassy weed infestations are candidates for outbreaks, and this is where scouting efforts should be directed. A definite potential exists for damaging populations in corn, peas, potatoes, winter wheat and many other crops. Close observation of fields in the next several weeks is advised.

FORAGES

ALFALFA WEEVIL: Adult populations have increased during the past week in the southern districts. Counts in alfalfa vary from 1-6 per 50 sweeps, and small larvae are emerging in fields with a pronounced southern exposure. At this time larval numbers are very low, averaging about 1-2 per 50 sweeps. Tip feeding injury to alfalfa should become evident within the next two weeks.



Alfalfa weevil

Krista Hamilton DATCP

MEADOW SPITTLEBUG: Egg hatch was noted on May 7 in Richland County. Nymphs remain scarce and have not moved onto alfalfa plants in substantial numbers.

CLOVER LEAF WEEVIL: Alfalfa fields surveyed in the southern areas contained low populations of 1-3 larvae per 50 sweeps. Only one field in Dane County had 8 per 50 sweeps, which is still comparatively low. Minor feeding injury was noted on a few clover plants.

PEA APHID: Observations in the south-central and southwest districts showed some increase in populations since the last report. Numbers of wingless females and nymphs varied from 11-72 per sweep in Columbia, Dane, Grant, Green and Iowa counties, in comparison to 5-12

DEGREE DAYS JANUARY 1 - MAY 14

LOCATION	50°F	2008	NORM	48°F	40°F
Dubuque, IA	285	242	—	275	639
Lone Rock	280	226	—	263	607
Beloit	297	278	—	288	654
Madison	262	221	329	253	582
Sullivan	282	265	312	272	620
Juneau	258	242	—	250	573
Waukesha	265	224	—	260	592
Hartford	248	213	—	245	559
Racine	239	184	—	236	538
Milwaukee	231	179	238	230	529
Appleton	208	177	253	202	473
Green Bay	175	144	243	170	424
Big Flats	247	201	—	227	529
Hancock	240	202	326	217	507
Port Edwards	228	191	298	213	495
La Crosse	272	209	353	253	597
Eau Claire	248	183	300	234	546
Cumberland	220	155	269	196	484
Bayfield	130	76	176	114	326
Wausau	185	165	251	172	425
Medford	198	146	214	182	448
Crivitz	169	130	—	156	398
Crandon	155	129	217	136	362

Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2009.
 NORMALS based on 30-year average daily temps, 1971-2001.

aphids per 50 sweeps noted in the same areas last week. In the southeast, numbers ranged from 4-48 per 50 sweeps, with an average of 21 per 50 sweeps. A significant portion of the counts were comprised of small nymphs, indicating that reproduction is well underway. Migration to peas can be expected later this month or early in June.

TARNISHED PLANT BUG: Adults are common in field collections throughout the southern half of the state, with populations ranging from 1-19 per 50 sweeps. Nymphs could not be found this week in any alfalfa field checked in the central and southern areas.

CORN

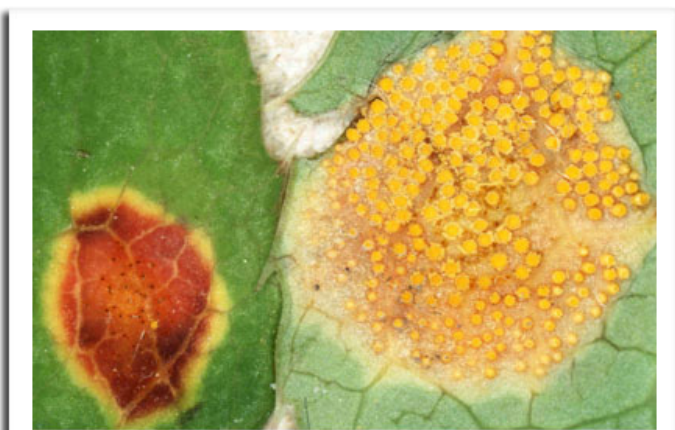
BLACK CUTWORM: Moth activity, as measured by pheromone traps, continued to be light to moderate in the last week. Numbers ranged from 0-14 per trap, with a

total of 124 moths captured on the nights of May 8-13. Egg deposition is expected to be intense at this time. Small larvae produced by the spring flight of moths could be encountered in emerging corn fields as early as next week. Other susceptible crops such as asparagus, cabbage, peas, potatoes and leafy greens should be scrutinized for larval feeding later this month. Field and weather conditions this spring are highly conducive for outbreaks of this pest, the most destructive of all cutworms.

EUROPEAN CORN BORER: The first moths of the season may appear in black light traps by May 22 in the south, May 28 in the central areas, and June 4 in the north. Larval surveys conducted last fall indicate that there is an extremely low potential for economic infestation by the first generation in June. Subsequent reports and black light trap counts listed on the final page of each bulletin issue should be watched closely to appraise the progress of this insect.

SMALL GRAINS

CEREAL RUSTS: The aecial stages of stem rust (*Puccinia graminis*) and crown rust (*Puccinia coronata*) are developing on barberry and buckthorn, respectively, in Dane County. Aeciospores from these alternate hosts are responsible for the initial rust infection of grass hosts, which may include wheat, barley, rye, oats, brome or even quackgrass. Following infection of the grass by aeciospores, the rust fungus produces repeating cycles of urediniospores, the signs of which are the characteristic red spore masses that give the diseases the "rust" name. Crown rust is the most widespread and damaging disease of oats in Wisconsin.



Black stem rust on barberry

Anette Phibbs DATCP

Strains of stem rust (termed *forma specialis* in the scientific nomenclature system) infect specific grass species. Samples of stem rust aecia have been sent to the USDA Cereal Disease Laboratory to determine which species of grass are likely to be infected by rust from the sampled barberry bushes.

SOYBEANS

BEAN LEAF BEETLE: Preliminary surveys for overwintered beetles in alfalfa have been negative. In previous years the first adults were swept from fields as early as May 1, but a later emergence and fewer adults are expected this season due to cool spring temperatures and high winter mortality. Field specialists are prepared to begin their annual survey in alfalfa as soon as the first beetles are detected.



Bean leaf beetle

Krista Hamilton DATCP

FRUITS

CODLING MOTH: The orchards near East Troy and Elkhorn in Walworth County reported having captured one moth each during the May 8-14 monitoring period, which represents the start of the first flight of codling moths in Wisconsin. Frequent trap checks are advised for southern orchards in the next two weeks to document the "biofix" or first sustained capture of moths.

OBLIQUEBANDED LEAFROLLER: Pheromone traps for both the EASTERN and WESTERN strains of this leafroller are being deployed in select western Wisconsin apple orchards this season. Formerly, only the eastern strain was monitored by the DATCP network of apple insect

trappers, but it has been speculated that the Wisconsin OBLR population is comprised of both strains. The intent of this experimental trapping program is to determine the identity of the OBLR population in the western areas, and to compare the relative effectiveness of the lures for the two strains. A similar University of Minnesota study found that the pheromone blend produced for the western strain captured significantly higher numbers of males than the blend for the eastern strain, suggesting that the Minnesota OBLR populations are more closely related to the western strain. Results will be analyzed and reported in later issues of this bulletin.

SPOTTED TENTIFORM LEAFMINER: Adult emergence peaked last week and is now declining at some locations in the southern and central districts. Inspection of orchard blocks for sapfeeder leaf mines should begin 10-14 days after the peak capture date. The economic threshold for the first generation is 0.1 mine per leaf.

CRANBERRY REPORT: The Wisconsin cranberry crop generally appears to be in good condition, despite cool spring weather. Some sites with inadequate flood waters were impacted by severe winter temperatures, but crop scouts are reporting sufficient upright bud counts for most acreage at this early stage in the season.

In response to higher fertilizer costs, growers are reviewing their nutrient management plans. Some fertilizer sources have increased their prices 2-4 times previous market levels, particularly the nutrients phosphorus and potassium. Prices for urea and ammonium sulfate also have risen sharply, but nitrogen use is discretionary. Controlling fertilizer use will be an important consideration with the 2009 cranberry crop.

BLACKHEADED FIREWORM: First generation larvae are emerging in sanded beds and historic hotspots in Jackson, Monroe and Wood counties. Webbing and injury to new growth should soon become apparent. Visual sampling of beds, especially those with a history of fireworm infestation, is recommended.

JUNE BEETLE: The first June beetles (*Phyllophaga anxia*) of the season were trapped on May 14 in Wood County, signaling the start of the adult flight period in the central areas. Mating and egg deposition are expected to increase over the next several weeks.

VEGETABLES

COMMON ASPARAGUS BEETLE: Egg deposition and hatch are underway in southern and central Wisconsin, as far north as Hancock in Waushara County. Although no reports of adults or feeding injury were received as of May 14, this insect is likely infesting some asparagus plantings.



Common asparagus beetle

Jan Hendrickx www.insectfotos.nl

SEEDCORN MAGGOT: The peak emergence of flies from the soil has passed at Wisconsin locations where 392 degree days (39°F) were reached in the last week. Damage to corn, peas, soybeans and vegetable crops may be averted by delaying planting until most of the population has reached the non-feeding pupal stage, approximately 446 additional degree days beyond the initial 392 degree days (or about 2½-3 weeks). Seedcorn maggot degree day accumulations through May 14 were as follows: Eau Claire 469, La Crosse 630, Madison 545, Milwaukee 533, Green Bay 413, and Wausau 401 (simple base 39°F).

IMPORTED CABBAGEWORM: These pale white cabbage butterflies were noted for the first time this season on May 4 in Iowa and Richland counties. Adults have become more abundant in the past two weeks, and females are ovipositing eggs on cruciferous weeds and early-planted cole crops. Routine scouting for eggs and newly hatched larvae during the oviposition period is advised. Infestation levels in cabbage should not exceed 30% at the transplant to cupping stages, 20% at the cupping to early head stages, and 10% at the early head to harvest stages. Early applications of Bt (*Bacillus thuringiensis*) are effective against the small larvae.

STRIPED CUCUMBER BEETLE: A single specimen was swept from a Walworth County alfalfa field on May 12, indicating that overwintered beetles are active in the southeast. Seedling and transplanted cucurbits such as cucumbers, squash, melons, and pumpkins are at greatest risk of direct feeding injury and bacterial wilt transmission by beetles from May to early July. Field margins and interiors should be inspected 2-3 times per week to ensure numbers do not exceed the economic threshold of 4-5 beetles per 50 plants.



Striped cucumber beetle

Naomi Smith i/pbase.com

CABBAGE MAGGOT: Adult emergence began by May 6 in the Beloit-Janesville area and by May 11 near Racine. Eggs hatch can be anticipated around May 14-19, with the resulting larvae feeding for a period of 3-4 weeks. It is recommended that control measures be started at peak emergence to suppress egg laying in early-season transplants.

WEEDS

WHITE CAMPION: Surveys conducted in Grant County on May 12 found a few early flowering plants. The first seedlings were noted in southern fields several weeks ago. This species is an occasional problem in no-till corn and soybeans, but is generally more abundant in alfalfa and small grains crops. White campion is a common impurity in clover and forage seed.

GRASSES: Annual grasses have become increasingly prevalent in the past week, especially in the southern areas where 250 degree days (base 50°F) were surpassed this week. A few of the surveyed fields in Grant, Iowa, Jefferson and Walworth counties showed

densities of 100 plants per m². Among the species noted were giant foxtail, yellow foxtail, green foxtail, wild proso millet and woolly cupgrass. Grasses such as these not only compete with field crops, but also provide suitable oviposition sites for pest insects such as the black cutworm and true armyworm. Fields with an abundance of grassy weeds indicate the need to adjust management strategies for improved grass control.

COMMON LAMBSQUARTERS: Seedlings in unplanted, no-till fields in Jefferson County measured 2 inches tall on May 11, while those present in tilled and planted fields had only recently emerged. Development of this common annual weed should be monitored over the next 3-5 weeks during the critical period of weed control.

GARLIC MUSTARD: Dense infestations of second-year plants are apparent along roadsides and in wooded areas throughout southern Wisconsin. Mechanical control measures such as hand-pulling or cutting flower stalks at the soil surface should be implemented at this time, just as plants are flowering and prior to seed set. Hand-pulling individual plants is very effective in reducing populations and seed productivity as long as the upper portion of the roots are removed. Cutting stalks during the flowering stage is a less disruptive technique. Plants should be bagged and disposed of to prevent seed dispersal.

The Wisconsin DNR permits landfill disposal of garlic mustard and other invasive plants collected for eradication purposes. Invasive weeds must be separated from other yard waste and placed in a clear plastic bag. Further guidelines are available at <http://dnr.wi.gov/invasives/publications/pdfs/WeedDisposalLetter.pdf>.



Garlic mustard

Clarissa Hammond DATCP

NURSERY & LANDSCAPE

SPRUCE SPIDER MITE: A spruce planting of approximately 20 acres in Portage County was moderately infested by a combination of this mite and spruce needle drop. The diagnosis was made by plant pathologists at the DATCP Plant Industry Laboratory who noted empty eggs cases and adults on the symptomatic spruce sample collected last week. Stippling of the needles on more than 10% of the foliage may require intervention with a miticide or insecticidal soap, only if the mites are active. Phenological indicators around 100-200 degree days (base 50° F), such as saucer cup magnolia pink bud to early bloom, Norway maple blooming, and amelanchier beginning bloom, signal the control period for spring mite populations.

WINGED EUONYMUS SCALE: Nursery inspectors noted overwintered females (the immobile stage) on euonymus in Rock County. This scale insect inhibits photosynthesis, reduces plant vigor, and may kill entire plants. Control measures include pruning out and destroying infested branches before the mobile crawlers emerge, or applying insecticidal soaps or oils to newly hatched crawlers in early June, with four applications 10-12 days apart.

SEPTORIA LEAF SPOT: Spirea 'Goldflame' shrubs in a Rock County nursery were lightly infected with this common fungal disease, characterized by small, dark lesions that initially appear on the lower leaves and stems and later enlarge and spread to the upper leaves. Its incidence may be reduced by spacing plants to increase air circulation.



Septoria leaf spot on Spirea

Liz Meils DATCP

PHOMOPSIS BLIGHT: This disease of evergreens was observed on the juniper cultivar 'Blue Chip' in Kenosha County. Affected plants develop yellow spots at the shoot tips of young needles that progress to the stems, causing gradual dieback of new growth and eventual death of the affected branch. Blighted parts should be pruned out as they appear by cutting 4-6 inches below the diseased area.

TOBACCO RATTLE VIRUS: Potted bleeding hearts at nursery retailers in Fond du Lac and Walworth counties were expressing the pale green mosaic pattern consistent with this virus, and consequently were pulled from production. Official laboratory diagnosis is pending.



TRV symptoms on bleeding heart

Anette Phibbs DATCP

WINTER INJURY: Severe browning of the foliage on arborvitae, fir, pine, spruce, yew and other conifers throughout the state has been attributed to this physiological disorder, caused by rapid temperature fluctuations in late winter and early spring. Symptoms generally are limited to the southern and western exposures but in extreme cases whole plants may be damaged.

TRAPPING NETWORKS

BLACK LIGHT TRAPS: Despite cold nighttime temperatures, 17 armyworms, 1 black cutworm and 1 forage looper were captured in the black light trap at Marshfield. Armyworms were also collected at Janesville, Lancaster and Mazomanie.

APPLE INSECT & BLACK LIGHT TRAP COUNTS MAY 8 - 14

COUNTY	DATE	SITE	STLM ¹	RBLR ²	CM ³	OBLR ⁴	OBLR ⁵	AM RED ⁶	AM YELLOW ⁷
Bayfield	5/08-5/14	Keystone	45	100	—	—			
Bayfield	5/08-5/14	Bayfield Apple	2	0	—	—			
Bayfield	5/04-5/11	Port Wing	1	0	—	—			
Brown	5/08-5/14	Oneida	800	68	—	—			
Chippewa	5/08-5/14	Chippewa Falls 1							
Chippewa	5/08-5/14	Chippewa Falls 2	0	0	0	0			
Crawford	5/08-5/14	Gays Mills							
Dane	5/08-5/14	Deerfield	442	51	—	—			
Dane	5/08-5/14	Stoughton							
Dane	5/08-5/14	McFarland							
Dane	5/08-5/14	West Madison	50	27	0	0			
Dodge	5/08-5/14	Brownsville	180	21	0	0			
Fond du Lac	5/08-5/14	Campbellsport	250	110	—	—			
Fond du Lac	5/08-5/14	Malone	1000	40	0	0			
Fond du Lac	5/08-5/14	Rosendale							
Grant	5/08-5/14	Sinsinawa	4	12	0	—			
Green	5/08-5/14	Brodhead	15	35	0	0			
Iowa	5/08-5/14	Dodgeville	310	55	0	8	5		
Iowa	5/08-5/14	Mineral Point	132	94	0	0			
Jackson	5/08-5/14	Hixton	660	56	0	—			
Kenosha	5/08-5/14	Burlington	800	38	0	0			
Marinette	5/08-5/14	Niagara	1300	51	—	—			
Marquette	5/08-5/14	Montello	12	14	0	—			
Ozaukee	5/08-5/14	Mequon	35	9.5	0	0			
Pierce	5/08-5/14	Beldenville							
Pierce	5/08-5/14	Spring Valley	282	42	—	—			
Racine	5/08-5/14	Raymond	271	40	0	6			
Racine	5/07-5/14	Rochester	1320	81	0	—			
Richland	5/08-5/12	Hillpoint	390	54	—	—			
Sheboygan	5/08-5/14	Plymouth	90	145	0	—			
Waukesha	5/08-5/14	New Berlin	138	21	0	2			
Walworth	5/08-5/14	East Troy	25	10	1	0			
Walworth	5/08-5/14	Elkhorn	250	40	1	0			

¹Spotted tentiform leafminer; ²Redbanded leafroller; ³Codling moth; ⁴Obliquebanded leafroller EASTERN; ⁵Oblique-banded leafroller WESTERN; ⁶Apple maggot red ball; *Unbaited red ball; **Baited red ball; ⁷Apple maggot yellow board.

COUNTY	DATE	SITE	ECB ¹	TA ²	BCW ³	SCW ⁴	DCW ⁵	CE ⁶	CEL ⁷	WBC ⁸	FORL ⁹	VCW ¹⁰
Columbia	5/08-5/14	Arlington	0	0	0	0	0	0	0	0	0	0
Dane	5/08-5/14	Mazomanie	0	1	0	0	0	0	0	0	0	0
Grant	5/08-5/14	Lancaster	0	1	0	0	0	0	0	0	0	0
Manitowoc	5/08-5/14	Manitowoc	—	—	—	—	—	—	—	—	—	—
Marathon	5/08-5/14	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	5/08-5/14	Sparta	—	—	—	—	—	—	—	—	—	—
Rock	5/08-5/14	Janesville	0	3	0	0	0	0	1	0	0	1
Walworth	5/08-5/14	East Troy	—	—	—	—	—	—	—	—	—	—
Wood	5/08-5/14	Marshfield	0	17	1	0	0	0	0	0	1	0

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