Volume 59 No. 03 May 15, 2014

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

Continued wet conditions across much of the state stalled fieldwork and exacerbated planting delays. Several rounds of showers and thunderstorms affected southern and central Wisconsin early in the week as warm, humid air streamed into the region ahead of a low pressure system. Some thunderstorms on May 12 became severe and produced heavy downpours, damaging winds and large hail up to two inches in diameter across the southern counties. A few locations such as Sullivan (4.96 inches), Pell Lake (4.01 inches) and Whitewater (5.32 inches) received in excess of four inches of rain for the day. The rainfall caused localized flooding and slowed last week's rapid planting pace of corn, oats, potatoes and soybean. Southerly winds associated with the storms also carried significant numbers of black cutworm moths into southwestern Wisconsin, as well as a variety of other migratory insect pests.

LOOKING AHEAD

BLACK CUTWORM: Another major flight of moths arrived from May 8-14. High individual trap counts for the week were 32 moths near Platteville in Grant County and 31 at Leeds in Columbia County, with a total of 353 moths captured in 34 traps. Based on the black cutworm degree day model, 171 degree day units (base 50°F), or about 14 days, remain before larvae in southwestern Wisconsin reach the corn-cutting fourth-instar stage. This event has been tentatively forecast to begin by May 29, but could be delayed if cool weather persists this month.

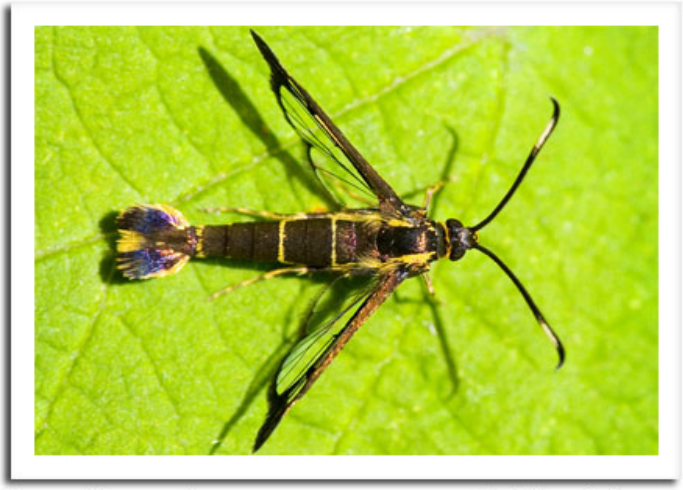
ALFALFA WEEVIL: Larvae are expected to emerge in advanced alfalfa fields in the week ahead. Regular scouting is advised beginning at 300 degree days (sine base 48°F), or by May 19 in the southern counties and May 27 in the central counties, where temperatures and corresponding heat unit accumulations have been considerably lower this spring.

POTATO LEAFHOPPER: Migrants were collected in low numbers on May 14 from six alfalfa fields, two in Jefferson County and four in Dodge County. Their appearance suggests the first distinct migration event of 2014 has occurred.

EUROPEAN CORN BORER: Pupation of overwintered larvae has started in the south-central and southwestern areas of Wisconsin and the first spring moths could emerge by May 25 near Janesville and June 3 near Hancock. Black light traps should be installed several days in advance of the flight.

WOOD BORERS: Apple growers who suspect borer infestation in their orchards are reminded to set pheromone traps now for three borer species: the American

plum borer, the dogwood borer and the lesser peach tree borer. The traps will indicate which species is present, seasonal flight activity, and when treatments should be applied for optimal effectiveness.



Dogwood borer moth Jim Gilbert flicker.com

FORAGES & GRAINS

ALFALFA WEEVIL: Surveys this week found adults at the very low rate of 1-3 per 100 sweeps. Egg deposition is under way across southern Wisconsin, and the first weevil larvae should appear in sweep net collections next week.

PEA APHID: Nymphs were collected from 36 of the 45 (80%) alfalfa fields sampled in the last reporting period. The high count of 35 aphids per 100 sweeps was found east of Mazomanie in Dane County.

TARNISHED PLANT BUG: Alfalfa surveyed in the south-central and west-central areas contained low counts of 1-12 per 100 sweeps. The average was five per 100 sweeps, an increase from two per sweep in the previous week. Plant bug populations rarely attain economic levels in alfalfa in spring, but their relative abundance can be an indicator of potential problems for apples, strawberries and other fruits and vegetables.

CORN

EUROPEAN CORN BORER: Larvae are pupating in Grant, Lafayette and Rock counties and in other warm southern Wisconsin locations. These advanced corn borers are expected to spend the next 10-14 days in the pupal stage before emerging as moths by the end of the month. Elsewhere in the state, pupation has not yet started and the first moths are unlikely to appear before early June.

WIREWORM: This soil pest has been noted during surveys in the last two weeks and, like the black cutworm, could injure corn seedlings in the next 2-3 weeks. Corn planted into fields formerly in alfalfa or pasture is most vulnerable to infestation. Damage should become evident shortly after emergence. In severe situations, or if wireworms have been a serious problem in the past, treatment may be necessary.

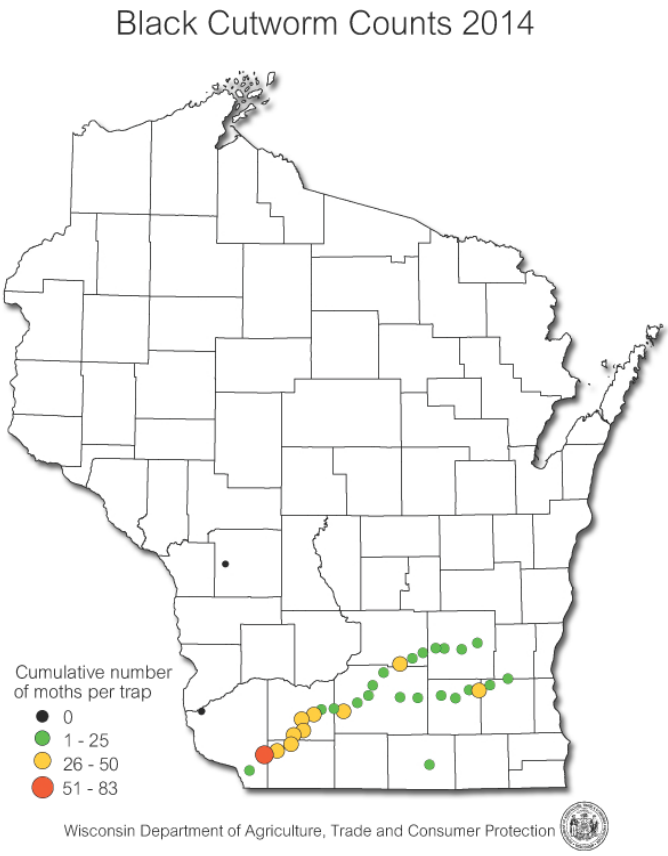
BLACK CUTWORM: Moths arrived in high numbers for the second consecutive week. The network of 34 pheromone traps distributed in southwestern Wisconsin registered another 353 moths, for a cumulative total of 649 moths as of May 14. A total of 211 moths were captured the week before. Black cutworm migrants began appearing in the state in mid-April this year and egg deposition

DEGREE DAYS JANUARY 1 - MAY 14

LOCATION	50°F	2013	NORM	48°F	40°F
Dubuque, IA	264	230	351	255	468
Lone Rock	224	214	—	218	424
Beloit	282	268	360	274	504
Sullivan	163	225	313	157	336
Madison	214	210	335	210	415
Juneau	172	189	—	169	346
Racine	153	164	—	158	340
Waukesha	163	184	—	157	336
Milwaukee	148	156	263	148	321
Hartford	163	169	—	157	336
Appleton	126	154		122	284
Green Bay	103	128	256	105	258
Big Flats	179	175	—	166	316
Hancock	179	176	324	166	316
Port Edwards	157	163	314	143	285
La Crosse	203	176	372	191	381
Eau Claire	154	151	319	147	300
Cumberland	104	131	268	94	201
Bayfield	36	81	—	31	84
Wausau	106	145	266	99	218
Medford	100	139	233	96	205
Crivitz	84	117	—	84	195
Crandon	72	130	214	67	152

Method: ModifiedB50; SineB48; ModifiedB40 as of Jan 1, 2014. NORMALS based on 30-year average daily temps, 1981-2010.

is now occurring on winter annual weeds such as common chickweed, peppergrass and yellow rocket in no-tillage and reduced tillage fields. The expected increase in late-planted and no-till corn acreage this season means a greater percentage of fields will be attracttive for oviposition by the moths now arriving, leading to the likelihood of subsequent larval injury. Larvae resulting from the spring flight could begin cutting corn seedlings by May 29.



FRUITS

THRIPS: According to Orchard IPM Specialist John Aue, the severe thrips infestation noted in a Sauk County apple orchard on May 9 suggests a major migration occurred late last week and that this pest warrants close attention this spring. Chemical intervention at petal fall or first cover may be required for orchards experiencing heavy populations. John advises growers to check buds on several different varieties in multiple locations, including the orchards perimeter, for thrips activity. A count of three or more thrips per fruit bud can cause abnormal leaf formation, leaf tatter, flower injury and reduced fruit set and is considered an economic population. Materials available for thrips control are spinosad (Entrust) for organic growers and spinetoram for conventional growers (Delegate or Radiant [for strawberries]).

REDBANDED LEAFROLLER: The first flight has accelerated and egg deposition is well under way. Small larvae should begin emerging in the next two weeks. A recommended sampling method for this insect is to start monitoring for early-instar larvae on foliage and watersprouts 10-12 days after the first moth is registered. Late-instar larvae and pupae can be found by searching for folded leaves. An important distinguishing feature of the RBLR larva is its uniform coloration (both the body and head are yellowish-green). Other leafrollers have black or dark heads.

SPOTTED TENTIFORM LEAFMINER: Peak emergence of first brood moths is approaching across much of the state. The apple orchards near Deerfield in Dane County and Oneida in Brown County reported high counts of 800-825 moths per trap from May 7-14. Elsewhere counts ranged from 1-546 per trap. The number of moths captured during the period defined as a “peak flight” varies by orchard but is generally in the range of 800-1,200 per trap per week.

ORIENTAL FRUIT MOTH: The first of three moth flights that occur annually in Wisconsin has begun across the south. Apple growers concerned about this insect should place pheromone traps by early next week.

Oriental fruit moth www.ontariomoths.com

VEGETABLES

ONION MAGGOT: Flies of the first and most damaging generation will begin emerging next week in parts of

southern Wisconsin. Simple cultural controls such as removal of onion cull piles and crop rotation have become even more critical now that the onion maggot has developed resistance to many of the insecticides used as granular furrow treatments at seeding. Proper sanitation is the best preventative measure.

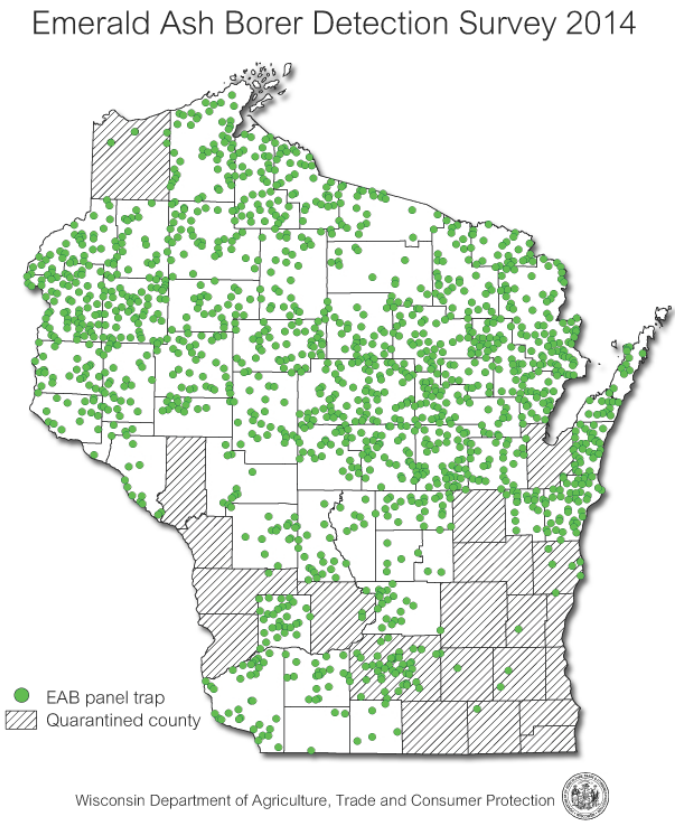
Onion maggot fly *bayer.warinteractive.com*

CABBAGE MAGGOT: Peak emergence of flies theoretically has occurred near Janesville, Lone Rock and Platteville following the accumulation of 300 degree days (base 43°F) as of May 14. Emergence should peak next week across the southeastern and central counties. Damage by this pest can be avoided by planting or transplanting cole crops two weeks from now, after most of the population has pupated.

LATE BLIGHT: No cases have been confirmed in Wisconsin so far this season, but this disease could be especially severe under environmental conditions experienced this spring and given the presence of the late blight pathogen in the state in 2013. Potato and tomato growers should remain on alert and prepared to take appropriate measures to protect their crops. A reminder that Wisconsin Administrative Code (ATCP 21.15(2)) requires potato cull piles to be fed, disked in or otherwise removed by May 20, to prevent late blight from occurring on volunteer plants.

NURSERY & FOREST

EMERALD ASH BORER: The green symbols in the accompanying map represent the approximately 1,500 EAB traps being set by DATCP, DNR and the USDA-APHIS in 2014. Detection trapping will be conducted in campgrounds, recreation areas, major transportation arteries, sawmills and other high-risk locations statewide, with an emphasis on the 52 counties in which EAB has not yet been found. The purple panel traps are baited with an attractant and have a sticky exterior to capture EAB adults. The beetles are expected to begin emerging from beneath the bark of ash trees when 350 and 450 degree days (base 50°F) have accumulated, or by June 1 in far southern Wisconsin and about one month later in the northern counties. Placement of the purple panel traps is scheduled to start next week.



CHILLING INJURY: A variety of ornamental plant samples showing symptoms consistent with chilling injury have been submitted to the Plant Industry Bureau Laboratory for testing this spring. Delphinium and petunia samples with mottled and chlorotic leaves, speedwell with dwarfing and distortion, and a slow-growing vinca are among the plants received. Plant chilling injury refers to a physiological disorder caused by low temperature stress in the absence of freezing. Symptom expression varies by plant species, as does the range of temperatures at which chilling can occur. Symptoms may appear as leaf spots, mottling or chlorosis, delayed growth, or bud abortion. Buds and young leaf tissues are most sensitive and can emerge puckered and distorted, or with necrotic

spots. Although injury may persist for several weeks after chilling has occurred, most plants outgrow the symptoms and eventually resume normal development.

Chilling injury on mayapple Anette Phibbs DATCP

SPIDER MITE: Damage attributed to these minute arthropods was observed on echinacea 'Southern Belle', mandevilla and sweet potato vine at greenhouses in Ozaukee and Pierce counties. Symptoms of injury vary by species of mite and the host plant being attacked, but usually include stippling, bronzing and mottling of the upper leaf surface. The species most commonly found in greenhouse settings are the two-spotted spider mite and cyclamen mite. Control of these mites and others relies upon an understanding of their biology, so distinguishing between mite species is critical.

VIRUSES: Nursery inspectors report finding relatively few pests during early-season greenhouse and garden center inspections, with the exception of plant viruses, which continue to be a common problem again this season. The viruses observed this week, and host plants infected, were as follows: cucumber mosaic virus (CMV) on aconitum 'Carmichaelii arendsii', astilbe 'Fanal', 'Stand and Deliver', delphinium 'Black Knight', and phlox 'Blue Flame'; impatiens necrotic spot virus (INSV) on begonia 'non-stop yellow', Maltese cross 'Orange Gnome' and on wax plant; wisteria vein mosaic potyvirus on wisteria 'Blue Moon'; tobacco rattle virus (TRV) on astilbe 'Red Sentinal', dicentra 'Pink', 'White' and barrenwort 'Red Bishop's hat'; and tobacco mosaic virus (TMV) on petunia 'Blue Wave', 'Orange Flash', 'Poppy Red' and 'Sunflower Ray'. Although viruses rarely kill plants, they sometimes dramatically alter plant appearance and can greatly reduce the value of ornamentals. Control of virus diseases is a matter of prevention, including the use of virus-free planting and propagating stock. Diseased nursery plants should be removed and disposed of early in the season.

Tobacco mosaic virus symptoms on petunia Sue Lueloff DATCP

THRIPS: DATCP inspectors also noted thrips injury on dahlia, gazonia, gerbera, osteospermum 'Akila White' and verbena at garden centers in Ozaukee 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

APPLE INSECT & BLACK LIGHT TRAP COUNTS MAY 8 - 14

COUNTY	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	AM RED[5]	YELLOW[6]
Bayfield	Keystone	0	0				
Bayfield	Orienta						
Brown	Oneida	800	49				
Columbia	Rio	456	0				
Crawford	Gays Mills	229	35				
Dane	Deerfield	825	6				
Dane	McFarland	98	71				
Dane	Mt. Horeb	43	77				
Dane	Stoughton	54	142				
Fond du Lac	Campbellsport	12	17				
Fond du Lac	Malone	2	13				
Fond du Lac	Rosendale	31	16				
Grant	Sinsinawa	0	0				
Green	Brodhead	50	20				
Iowa	Mineral Point	450	135				
Jackson	Hixton	768	12				
Kenosha	Burlington	175	100				
Marathon	Edgar	546	38				
Marinette	Niagara						
Marquette	Montello	243	43				
Ozaukee	Mequon	11	61				
Pierce	Beldenville	0	0				
Pierce	Spring Valley	0	2				
Racine	Raymond	147	93				
Racine	Rochester	368	61				
Richland	Hillpoint						
Sheboygan	Plymouth	370	99				
Walworth	East Troy	0	0				
Walworth	Elkhorn	0	0				
Waukesha	New Berlin	0	3				

[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.

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	0	11	0	0	0	0	1	0	6	0
Dane	Mazomanie										
Fond du Lac	Ripon	0	0	0	0	0	0	0	0	0	0
Manitowoc	Manitowoc										
Marathon	Wausau										
Monroe	Sparta										
Portage	Plover										
Rock	Janesville	0	10	0	0	0	1	0	0	4	1
Vernon	Coon Valley										
Walworth	East Troy	0	9	2	0	0	0	0	0	2	0
Wood	Marshfield	0	0	0	0	0	0	0	0	0	0

[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.