

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

Mostly sunny and drier weather settled over Wisconsin, improving conditions for winter wheat, emerging summer crops, and pastures. Daytime highs in the 70s and lower 80s were near seasonal normals inland, with cooler temperatures near Lakes Michigan and Superior. The drier conditions favored a rapid pace of fieldwork after prolonged planting delays due to an abnormally wet spring. Alfalfa harvesting resumed and the last acres of corn and soybeans were planted in fields where soil moisture allowed. The return of dry weather was also suitable for overdue post-emergence herbicide applications and codling moth treatments in apple orchards. After the devastating series of spring frosts that destroyed fruit crops in 2012, Wisconsin fruit growers are optimistic about prospects for the 2013 growing season. Many apple orchardists are reporting good fruit set and Door County cherry growers anticipate a heavy crop this year.

LOOKING AHEAD

POTATO LEAFHOPPER: Nymphs are appearing in alfalfa. Counts of this stage and the adults remain below the economic threshold of 1.0 per sweep in 8- to 11-inch fields, but reproduction could surge in response to the hot weather predicted for next week and systematic sampling of alfalfa regrowth is advised.

EUROPEAN CORN BORER: The tallest corn is now susceptible to infestation by first generation larvae. Early signs of feeding such as pin holes and shot holes in the whorl leaves should be evident in non-Bt hybrids next week.

STALK BORER: Minor injury was noted in Buffalo, Jackson, Richland and Trempealeau counties where 1-4% of corn plants in the peripheral rows were damaged. Leaf feeding is expected to become pronounced by early July as more larvae migrate from weed hosts to corn. Spot treatment may be justified for infestations affecting 10% of plants.

APPLE MAGGOT: Emergence of flies from the soil could begin by June 22 near Janesville, June 25 near Madison, and July 3 near Eau Claire. This annual event corresponds with the accumulation of 900 degree days (base 50°F) when soil moisture is adequate. Traps should be placed next week in perimeter trees adjacent to abandoned orchards or woodlots to capture the earliest flies.

WESTERN BEAN CUTWORM: A single, very early moth was registered in the Janesville pheromone trap on June 15. Counts in 33 other traps were negative. The start of the annual flight is anticipated in 1-2 weeks.

TRUE ARMYWORM: Surveys indicate populations remain below economically significant levels, but continued

scouting for localized infestations is recommended. Many cornfields have an abundance of weeds favorable for armyworm problems and late herbicide treatments at these sites may force the larvae from grasses onto corn plants.



True armyworm leaf feeding

Krista Hamilton DATCP

EASTERN TENT CATERPILLAR: Pupation has begun and the first adults may begin collecting in black light traps and at lights in the next two weeks, following the accumulation of 725 degree days (base 50°F).

FORAGES

ALFALFA WEEVIL: Larval counts have begun to decline due to pupation and harvest of first crop alfalfa. Carryover of larvae into second-crop regrowth is common, although averages are below 0.5 per sweep and leaf tip damage is generally less than 20%. Most larvae are in the late instars and will pupate by early July. Routine scouting is suggested until the second crop is established or the weevil season has passed.

POTATO LEAFHOPPER: Migrant adult populations are approaching the economic threshold of 1.0 per sweep for 8- to 11-inch alfalfa and warmer temperatures expected next week could cause an abrupt population increase. Counts for the period of June 13-16 varied from 0.1-0.7 per sweep, with the highest average (14 per 20 sweeps) found near Richland Center. Nymphs were noted this week in scattered fields as far north as Black River Falls.

PEA APHID: This insect has become more numerous since early June and populations in the southern and central Wisconsin alfalfa now range from 0.2-6.7 per

DEGREE DAYS JANUARY 1 - JUNE 19

LOCATION	50°F	2012	NORM	48°F	40°F
Dubuque, IA	773	1208	891	828	1368
Lone Rock	735	1200	—	776	1310
Beloit	848	1245	903	858	1458
Madison	728	1173	856	770	1300
Sullivan	747	1157	831	772	1318
Juneau	667	1104	—	722	1220
Waukesha	639	1005	—	684	1178
Hartford	607	994	—	655	1137
Racine	592	949	—	645	1132
Milwaukee	573	933	725	623	1098
Appleton	582	994	778	632	1087
Green Bay	519	914	722	567	1018
Big Flats	610	1057	—	646	1117
Hancock	616	1052	837	659	1118
Port Edwards	579	1003	813	624	1062
La Crosse	665	1160	945	724	1208
Eau Claire	596	1024	837	650	1081
Cumberland	515	861	754	548	953
Bayfield	341	659	—	332	688
Wausau	526	884	738	556	966
Medford	529	878	666	568	974
Crivitz	470	842	—	499	924
Crandon	479	779	586	483	870

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

sweep. Dispersal of winged adults to peas has not been noted as of June 19.

CORN

EUROPEAN CORN BORER: The spring flight of moths has peaked in southern and west-central Wisconsin. Black light trap counts have been abnormally low since the flight began during the week of May 16-22, suggesting that the first generation of larvae are also likely to be low. Oviposition is occurring on corn, snap beans, potatoes and various weed hosts and leaf injury by newly-emerged larvae should be apparent in the tallest, non-Bt corn fields next week.

TRUE ARMYWORM: Larval populations are increasing in corn and alfalfa. Surveys conducted in the southern, west-central and north-central counties found light leaf feeding on 1-6% of the plants in the marginal rows of corn fields, while moderate numbers of ½- to ¾-inch

larvae were swept from scattered alfalfa fields. A strong potential exists for localized problems to develop in corn, lodged oats and grassy pea fields. As post-emergence herbicides begin killing the grasses in late-planted weedy corn fields, armyworm larvae may concentrate on plants in numbers sufficient to cause serious damage. A rescue treatment is justified if 25% of corn plants are infested with two or more small larvae ($\frac{3}{4}$ inch or shorter) or 75% of plants are infested with larvae of any size.

STALK BORER: Larvae ranging in size from $\frac{1}{2}$ - $\frac{3}{4}$ inch were the cause of light leaf injury to 1-4% of the edge row plants in cornfields in Buffalo, Jackson, Richland and Trempealeau counties. Similar levels of infestation were found late last week in Dane, Green, Rock and Walworth counties. Migration of stalk borers from grass and broadleaf weed hosts into corn is accelerating and spot treatment may be warranted by early July for fields showing 10% of plants with damage. As a reminder, most Bt corn hybrids will suppress but not completely control stalk borers, so field scouting is necessary through the V7 stage.



Stalk borer leaf feeding

Krista Hamilton DATCP

WESTERN BEAN CUTWORM: Pheromone traps are now being placed at selected sites statewide in preparation for the annual moth flight. Participants in the western bean cutworm monitoring program should begin reporting counts to Tracy Schilder at tracy.schilder@wisconsin.gov no later than June 26.

SOYBEANS

SOYBEAN APHID: Surveys of VE-V3 soybeans found aphids in 18 of 49 (37%) fields sampled in the southern

two-thirds of the state. Densities ranged from 1-32 aphids per infested plant on 1-28 per 100 plants examined. Specific counties in which the aphids were detected include Buffalo, Clark, Eau Claire, Fond du Lac, Green Lake, Jackson, Marathon, Marquette, Portage, Sauk, Sheboygan and Wood. Early colonies were also found in Dane, Iowa, Monroe and Richland counties during the previous week, suggesting that the aphids are already distributed at low densities across most of the state.

BEAN LEAF BEETLE: Light defoliation was again noted in southern Wisconsin soybean fields. Less than 10% of the plants were affected in fields surveyed in Columbia, Dane, Iowa, Richland and Sauk counties, and no more than 1-2 adults per 25 feet of row were observed. Treatment is recommended for defoliation levels of 40% defoliation or populations of 39 or more beetles per foot of row during the vegetative stages.



Bean leaf beetle

Krista Hamilton DATCP

FRUITS

CODLING MOTH: Several apple orchards are 250 or more degree days (base 50°F) beyond the first biofix and treatments for first generation larvae have been applied. Larvicides or other controls should be maintained to prevent problems by the current and subsequent summer generations. Apple growers are reminded that pheromone lures degrade rapidly at warm temperatures and should be replaced every 3-4 weeks.

REDBANDED LEAFROLLER: Moth counts remained very low again this week, ranging from 0-30 per trap, with an average of 3.1 per trap. The second flight is likely to have begun at southern locations, although recent trap data

indicate otherwise. The extremely low numbers of moths collected since early June suggests that populations are still primarily in the larval stages or that controls applied a few weeks ago were very effective.

SAN JOSE SCALE: The emergence of nymphs or “crawlers” may begin in 1-2 weeks in southern locations. Sampling by taping scaffold branches is advised to determine the relative abundance of scales, the start and end of the hatching period, and if treatments are effective. The tape should be changed every 7-10 days as long as the crawlers are active.

PLANT BUG: Orchard IPM Specialist, John Aue reports that the clear liquid droplets appearing on peaches in some orchards may have been caused by tarnished plant bugs, stink bugs or even plum curculio. He notes that mowing orchard grasses often drives these insects onto developing fruits.



Tarnished plant bug

Oldrich Roucka www.naturfoto.cz

OBLIQUEBANDED LEAFROLLER: The first flight of moths continued for the second week and is expected to persist through mid-July. Apple growers who experienced OBLR problems in recent years should consider setting additional traps to determine where to concentrate sampling efforts. Monitoring the second brood of larvae soon appearing in terminals will also indicate the potential for problems later this season.

ROSY APPLE APHID: Some orchards that applied insect growth regulators at pink for aphid control are now experiencing more damage than orchards that applied no aphid controls. Natural enemies are apparently regulating the aphids in untreated orchards, according to John Aue. He advises apple growers to examine curled leaves for

cast skins and live aphids. The presence of live aphids (instead of cast skins) suggests colonies could continue to increase and cause extensive damage by mid-summer if controls are not implemented.

VEGETABLES

COLORADO POTATO BEETLE: Larvae from overwintered beetles are predominantly in the first and second instars. Bacterial insecticide treatments of *Bacillus thuringiensis* var. *tenebrionis* (Btt) are most effective at this time, while the larvae are very small. Most products persist only 1-2 days and must be reapplied 2-3 times to effectively control populations.

CORN EARWORM: An early-season migration that has been under way since May 30 appears to have peaked from June 6-12 with the capture of 154 moths in the Janesville pheromone trap. Moderate counts of 45 and 33 moths were registered this week near Ripon and Janesville, respectively. As previously stated, the larvae produced by these early migrants are unlikely to impact sweet corn, but cabbage, peppers and other garden vegetables may be at risk of damage later this month or in early July and should be monitored for signs of larval feeding.



Corn earworm larva

Mark Moore Moore Communications

VARIEGATED CUTWORM: Larvae were found in counts of 2-3 per 100 plants in a cornfield near Richland Center. This sporadic pest, which appeared in record numbers in field, forage and vegetable crops last spring, is one of the most damaging cutworms on beans, potato and tomato. The larvae noted in Richland County were approximately one-inch long on June 18.



Variegated cutworm larvae on tomatoes Shirely Copeland Oklahoma

ROSE CHAFER: This beetle has been observed on perennials and in home gardens in the past week. The adults deposit eggs in the soil that hatch into grubs which feed on the roots of grasses, weeds and garden plants. Defoliation is expected to increase in the next 3-4 weeks, especially in areas of the state with sandy soils.



Rose chafer beetle Krista Hamilton DATCP

NURSERY & FOREST

LABELING NURSERY STOCK: Recent inspections of nursery stock retailers found many instances of trees and shrubs that were incorrectly labeled or had unsuitable hardiness ratings for Wisconsin. For example, inspectors observed Yoshino Cherry, which is hardy to Zones 5-8, for sale in Zone 3 without the hardiness zone identified on the tag. It is illegal to sell or distribute plants that are insufficiently hardy and cannot survive or grow in Wisconsin. Retailers are required to provide signage or

label woody landscape plants with the appropriate hardiness rating. Customers should carefully check labels and not presume all trees and shrubs offered for sale are adequately cold hardy for their area.

VOLUTELLA BLIGHT: Symptoms of this potentially lethal disease were noted on pachysandra and boxwood at several garden centers in Jefferson and Racine counties. Volutella blight begins as small, water-soaked leaf lesions that eventually turn brownish-black and necrotic. Recommended controls include removal of diseased leaves, stems and debris, and thinning existing plantings to promote air flow. For severe infections, nursery operators should remove diseased plants and follow with one or more applications of a broad-spectrum fungicide.



Volutella blight on pachysandra missouribotanicalgarden.org

GYPSY MOTH: *Bacillus thuringiensis* var. *kurstaki* (Btk) treatments were applied to approximately 1,540 acres in Bayfield, Douglas and Sawyer counties June 17-18, marking the completion of all Btk spraying in the state for the 2013 season. Mating disruption, or pheromone flake treatment, is scheduled to begin before the end of June in southwestern Wisconsin. The pheromone flakes are intended to interfere with population growth by disrupting gypsy moth mating.

PHOMOPSIS BLIGHT: This evergreen disease is reported to be infecting several varieties of juniper in Jefferson, Ozaukee, Sauk and Sheboygan counties. Plants with phomopsis blight 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 infected branch. Its occurrence can be reduced by pruning out symptomatic branches and twigs 4-6 inches below the diseased area, and disinfecting pruning shears

between each cut. Maintaining adequate spacing and airflow between plantings will also help to prevent it from spreading



Phomopsis tip blight on Juniper

Liz Meils DATCP

removing all other phlox plants from sale and the out-of-state supplier also voluntarily pulled all implicated phlox.



Phlox 'Fireworks' with stem and bulb nematode

Anette Phibbs DATCP

STEM AND BULB NEMATODE: The DATCP Plant Industry Laboratory, UW-Madison and USDA ARS Nematologists have confirmed the first detection in Wisconsin of the stem and bulb nematode, *Ditylenchus dipsaci*, one of the most destructive plant parasitic nematodes in temperate regions of the world. The nematode was discovered in phlox 'Fireworks' in a Jefferson County greenhouse. Recent detections have also been reported from Missouri in phlox and Minnesota in garlic.

Ditylenchus dipsaci is a recognized pest of a wide range of root crops, ornamental and nursery plants, and some field crops, including alfalfa, apples, beans, carrots, oats, onion, garlic, peas, potatoes and strawberries. This species completes its life cycle in stems, bulbs and leaves of hosts, causing distortion and discoloration of shoots and rotting of bulbs, tubers and rhizomes. The photo below shows shortening, twisting and reddening of the infested phlox plant. *Ditylenchus dipsaci* should not be confused with the potato rot nematode, *Ditylenchus destructor*, a state quarantine pest which feeds below-ground in roots, tubers and rhizomes and cannot survive desiccation.

Control of nematodes is often difficult and avoidance is the best strategy. The stem and bulb nematode can survive in dried plant debris, seed and in soil, so proper sanitation practices and removal of infected plant material is essential. The greenhouse in which the infested phlox plant was detected cooperated in

APPLE INSECT & BLACK LIGHT TRAP COUNTS JUNE 13 - 19

COUNTY	SITE	STLM ¹	RBLR ²	CM ³	OBLR ⁴	AM RED ⁵	YELLOW ⁶
Bayfield	Keystone	17	30	0	0		
Bayfield	Oriente	64	20	—	—		
Brown	Oneida	22	0	6	1		
Chippewa	Chippewa Falls	—	3	13	5		
Columbia	Rio	5	1	4	0		
Crawford	Gays Mills	—	—	—	—		
Dane	Deerfield	0	0	5	11		
Dane	McFarland	0	6	1	4		
Dane	Mt. Horeb	0	0	0	8		
Dane	Stoughton	4	0	15	8		
Dane	West Madison	16	0	5	6		
Fond du Lac	Campbellsport	5	0	0	0		
Fond du Lac	Malone	1	0	6	2		
Fond du Lac	Rosendale	10	0	3	2		
Grant	Sinsinawa	22	0	10	9		
Green	Brodhead	0	0	2	4		
Iowa	Mineral Point	87	0	21	6		
Jackson	Hixton	22	0	1	2		
Kenosha	Burlington	25	0	1	19		
Marathon	Edgar	31	19	4	9		
Marinette	Niagara	2	1	2	0		
Marquette	Montello	2	0	1	0		
Ozaukee	Mequon	0	0	3	1		
Pierce	Beldenville	7	3	80	0		
Pierce	Spring Valley	6	1	11	0		
Polk	Turtle Lake	0	3	30	0		
Racine	Rochester	20	0	9	41		
Richland	Hillpoint	19	0	12	14		
Sheboygan	Plymouth	10	0	5	2		
Walworth	Elkhorn	—	—	—	—		
Waukesha	New Berlin	—	—	—	—		

¹Spotted tentiform leafminer; ²Redbanded leafroller; ³Codling moth; ⁴Obliquebanded leafroller; ⁵Apple maggot red ball; ⁶Unbaited AM trap; ^{**}Baited AM trap; ⁶Apple 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	0	0	0	0	0	0	0	0	0	0
Columbia	Arlington	0	0	0	0	0	0	0	0	0	0
Crawford	Prairie du Chien	0	0	0	0	0	0	0	0	0	0
Dane	Mazomanie	5	1	1	0	0	0	0	0	0	0
Fond du Lac	Ripon	0	3	0	0	0	0	1	0	0	0
Manitowoc	Manitowoc	0	11	0	2	0	0	0	0	0	0
Marathon	Wausau	0	4	0	0	1	0	3	0	0	0
Monroe	Sparta	11	0	0	0	0	0	0	0	1	0
Portage	Plover	—	—	—	—	—	—	—	—	—	—
Rock	Janesville	3	7	0	0	0	0	0	0	0	0
Walworth	East Troy	0	2	0	0	0	0	0	0	0	0
Wood	Marshfield	2	12	0	0	0	0	4	0	2	0

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