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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

Cool, showery weather limited fieldwork and slowed crop development again this week. Temperatures were below normal for early June and ranged from the 30s across far northeast Wisconsin to the lower 70s in the south. Periods of rain brought surplus moisture to already excessively wet soils and further delayed alfalfa harvesting, which advanced only five points in the last week to 7% complete. Soybean planting also continued well behind schedule, with only 43% percent of the crop in the ground, trailing the normal 80%. Meanwhile, 26% of the state's intended corn acreage remains unplanted and only 44% of the crop has emerged. After another week of wet weather, numerous fields are waterlogged and many Wisconsin farmers have been left with the decision to plant their corn late, plant soybeans instead, or collect "prevented plant" crop insurance payments.

LOOKING AHEAD

EUROPEAN CORN BORER: Moths are depositing eggs on vegetables and weed hosts at southern and central locations where 450 degree days (base 50°F) were recently surpassed. Snap beans, lima beans, peppers and potatoes are at increased risk of infestation since corn taller than 18 inches is not yet available. The spring flight of moths may peak next week at advanced sites.

ALFALFA WEEVIL: Larval populations have continued to build under the wet weather pattern of the past three weeks. Leaf tip damage is generally less than 30%, although a few scattered fields in Jefferson and Dodge counties are showing economic defoliation levels of 40-80%. As stated last week, populations are expected to increase significantly by mid-June and failure to harvest the first crop on time could result in severe damage by the larger and more destructive third- and fourth-instar larvae. Repeated monitoring is advised until the rain subsides and alfalfa harvesting can resume.

CORN EARWORM: Last week's active weather carried the first corn earworm migrants into southern Wisconsin. Three specimens were registered at Janesville on May 29 and another 69 moths arrived from May 30-June 5. Corn is not at a critical growth stage for corn earworm damage to occur, but host plants may serve as oviposition sites for migrating first generation moths.

TRUE ARMYWORM: Minor flights have been registered on warmer evenings for several weeks and moths continue to appear in low numbers in black light traps. Small grains, corn and other susceptible crops are under a low to moderate threat of larval infestation and should be monitored this month for developing problems.

BLACK CUTWORM: Larvae from migrants that arrived last month are mostly in the second and third instars, but

some have grown large enough to begin cutting corn seedlings. Growers and crop consultants should remain vigilant for signs of feeding injury during the next 2-3 weeks, or until corn has surpassed the V-4 stage.

FORAGES

ALFALFA WEEVIL: Surveyed fields in the central and south-central areas contained populations of 0.1-9.2 first- to third-instar larvae per sweep, with an average of 2.4 per sweep. Larval infestations of consequence were confined to northeastern Jefferson and southeastern Dodge counties where leaf tip damage averaged 40% but ranged as high as 80%. Lower counts of 0.1-1.3 per sweep were observed in Columbia, Green Lake, Marquette, Waupaca and Waushara counties. Management plans at this time should include harvesting fields as soon as possible and monitoring new growth of the second crop for possible treatment needs.

POTATO LEAFHOPPER: Migrant adult populations are still well below-threshold at 0.1-1.4 per sweep. The weekly high count was found near Rio in Columbia County. Reproduction has not been noted as of June 5.

GRASS SAWFLY: Low numbers of these pale yellow, striped larvae have been found in some alfalfa fields. The caterpillar-like worms are the immature form of the grass sawfly, an insect belonging to the bee and wasp order Hymenoptera. The larvae, which should not be mistaken for armyworms, are suspected of feeding on grasses and pose no threat to alfalfa.

Grass sawfly larva *Krista Hamilton DATCP*

PEA APHID: Adults and nymphs are common in field collections in southern and central fields where counts

DEGREE DAYS JANUARY 1 - JUNE 5

LOCATION	50°F	2012	NORM	48°F	40°F
Dubuque, IA	523	907	634	550	977
Lone Rock	498	904	—	511	932
Beloit	591	936	645	594	1060
Madison	494	871	609	509	926
Sullivan	518	858	584	527	952
Juneau	454	809	—	484	869
Waukesha	439	723	—	462	844
Hartford	413	709	—	438	808
Racine	406	665	—	434	809
Milwaukee	392	650	483	417	780
Appleton	388	708	540	413	757
Green Bay	339	630	500	362	701
Big Flats	413	786	—	424	783
Hancock	418	777	599	436	783
Port Edwards	390	741	583	409	735
La Crosse	435	860	678	465	837
Eau Claire	388	748	597	413	732
Cumberland	341	621	531	347	640
Bayfield	205	452	—	192	446
Wausau	357	641	519	365	663
Medford	356	639	464	369	663
Crivitz	307	579	—	317	631
Crandon	328	553	416	321	601

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

vary from 0.5-11.4 per sweep. The average is about 3-4 per sweep. Counts of this level are considered non-economic in alfalfa, but aphid populations can escalate rapidly when natural enemy populations are disrupted by alfalfa weevil insecticide sprays. Harvesting fields on time rather than using insecticidal control is important for preserving natural enemies.

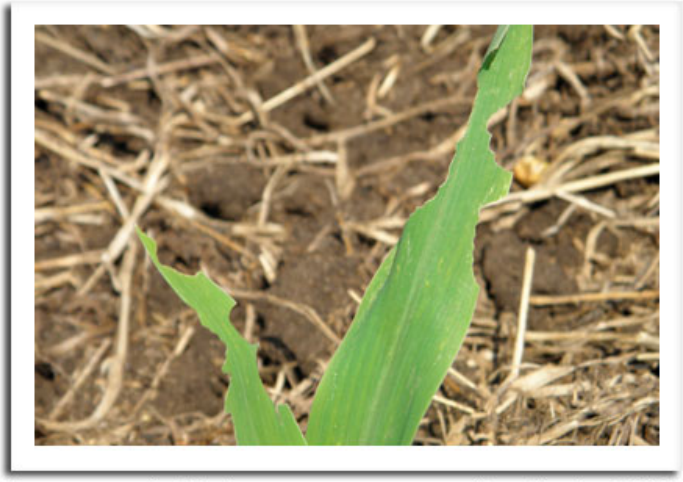
PLANT BUG: Nymphs of the alfalfa plant bug are appearing in sweep net collections, in addition to the tarnished plant bug, which has been present in low numbers since late April. Populations increased markedly this week with the addition of the many small nymphs, but remain far below the 5.0 per plant economic threshold.

CORN

BLACK CUTWORM: Larval infestations in corn have been observed in Columbia, Green Lake, Marquette, Waupaca and Waushara counties. Damage estimates

were low and ranged from 0.5-2.5%, with the exception of one Marquette County field in which 23% of plants were injured. Larvae found in the infested fields were about ¾ inch in length. The primary cutting period is now under way and could extend through late June this year. Crop consultants and field scouts should carefully inspect corn for evidence of this pest in the next 2-3 weeks. A rescue treatment is justified if more than 3% of plants are damaged.

TRUE ARMYWORM: Moderate flights have been documented at a few locations since mid-May, signaling a potential for larval outbreaks in small grains and corn. Reduced tillage corn fields following sod or small grains cover crops, and fields with early-season grassy weed pressure, are candidates for armyworm problems. Damage usually appears first at the margins of fields where the worms have migrated from another food source.



True armyworm leaf feeding injury *Krista Hamilton DATCP*

EUROPEAN CORN BORER: The spring flight of European corn borer moths began three weeks ago and egg deposition is now occurring on weeds, vegetables and various hosts other than corn. No moths were registered this week at any of the DATCP black light trap locations.

CORN ROOTWORM: Excessively wet soils and a delayed corn planting season suggest conditions may prove unfavorable for larval establishment this month. The first larvae are emerging in the far south, with 50% hatch projected for June 15-19 in the Beloit area and June 22-27 near Madison. This event occurs from 684-767 degree days (base 52°F).

WESTERN BEAN CUTWORM: Pheromone trap installation is planned for the next 2-3 weeks statewide. If warmer weather prevails this month, the first moths could emerge by early July. Persons interested in participating in the program should email Tracy Schilder at tracy.schilder@wisconsin.gov before June 12. Please supply your name, address, telephone number, and specify the number of traps to be placed.

SOYBEANS

SOYBEAN APHID: Colonization of VC-V1 soybeans was documented on June 4 at the West Madison Agricultural Research Station, according to a report from University of Wisconsin-Madison Entomologist, Dave Hogg. Densities were higher than expected at 1-17 aphids per infested plant, with an average of 0.7 winged "alate" adults and 5.3 nymphs per infested plant. Of the 100 plants sampled, 13 were infested. The report also states that aphids were abundant and producing numerous alates on buckthorn plants examined at four sites in the Madison area, although laboratory testing is required to confirm the species as soybean aphid, *Aphis glycines,* and not the buckthorn aphid, *A. nasturii.* At the very least, these observations indicate that soybean aphids are in the air, dispersing, and have the potential to find and rapidly colonize soybeans as soon as plants become available.

Soybean aphids *Krista Hamilton DATCP*

FRUITS

SPOTTED TENTIFORM LEAFMINER: Moth counts are expected to increase abruptly by mid-June as the second flight begins. Counts were low in the past week and ranged from 1-146 per trap, except at the Oneida and Raymond monitoring sites where 450-582 moths per trap

were reported. The economic threshold for STLM increases from 0.1 to 1.0 mine per leaf for the second generation of sapfeeder larvae.

PLUM CURCULIO: Beetle activity continued in southern and central orchards. Two adults were collected in traps at an orchard near Rio in Columbia County and oviposition scars are appearing on fruits. According to Orchard IPM Specialist John Aue, examination 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 for northern orchards where tree development is less advanced. Female weevils show a strong preference for early-sizing fruits and any fruits beyond 10 mm will be most attractive. John reminds organic growers that kaolin clay (Surround® WP) may have an unintended stress effect on trees and is not recommended as a plum curculio deterrent. Instead, he suggests the use of Pyganic applied at dusk on the next warm evening since most oviposition occurs at night.

OBLIQUEBANDED LEAFROLLER: The first of two flights this season is likely to begin next week in southern Wisconsin with the accumulation of 600 degree days (base 43°F). Sampling of 10 fruit clusters and 10 terminals in the outsides, centers, and tops of five trees per orchard should occur on a weekly basis after pheromone traps verify that emergence of the summer brood has started. Control is warranted for populations averaging three or more larvae per tree.

Obliquebanded leafroller moth Derrick Ditchburn www.dereila.ca

CODLING MOTH: A significant increase in codling moth activity was charted in the last week. Counts varied from 0-21 per trap, with an average of five per trap. The biofix was set at most southern Wisconsin orchards from May 19-29. Controls directed against first generation larvae should be applied from 250-350 degree days (base 50°F) post-biofix.

VEGETABLES

STRIPED CUCUMBER BEETLE: Seedling and transplanted cucurbits such as cucumbers and melons will be at risk of direct feeding injury and bacterial wilt transmission as beetles emerge this month. Cucumber beetles are such an effective carrier of the bacterial wilt pathogen that serious crop damage can occur if only 10% of the population is infected. Scouting field edges and interiors 2-3 times per week is advised. Beetle counts should not exceed 4-5 per 50 plants.

Striped cucumber beetle Mark Jankura flickr.com

ONION MAGGOT: First generation flies are active near Cumberland, Medford and Wausau in northern Wisconsin. Flies of the spring generation are often the most abundant and damaging, especially at sites 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 previous year's crop exceeded 5-10%.

COLORADO POTATO BEETLE: Adults continue to colonize potato fields and egg laying has begun. The presence of widely distributed, in-field populations of adults and early larvae suggests at-plant systemic neonicotinoids are not adequately controlling populations and a foliar spray may be warranted. The first of two foliar applications of an insect growth regulator or the biological

insecticide Bt can be made at egg hatch and again 7-10 days later.

IMPORTED CABBAGEWORM: Larvae have emerged statewide. Home gardens and larger cabbage plantings should be checked weekly for the yellow eggs (laid singly on plants) and velvety green caterpillars with a yellow, longitudinal stripe. The economic threshold for this pest in cabbage is 30% infestation at the transplant to cupping stages and 20% infestation at cupping to early head stage.

NURSERY & FOREST

ANTHRACNOSE: Sycamores and viburnums at nurseries in Washington and Jefferson counties are exhibiting foliage with brown, necrotic spots caused by the fungal disease Anthracnose. This disorder rarely results in permanent damage to trees unless severe symptoms persist for several consecutive years. Raking fallen leaves and pruning branches to promote air flow are the recommended cultural controls.

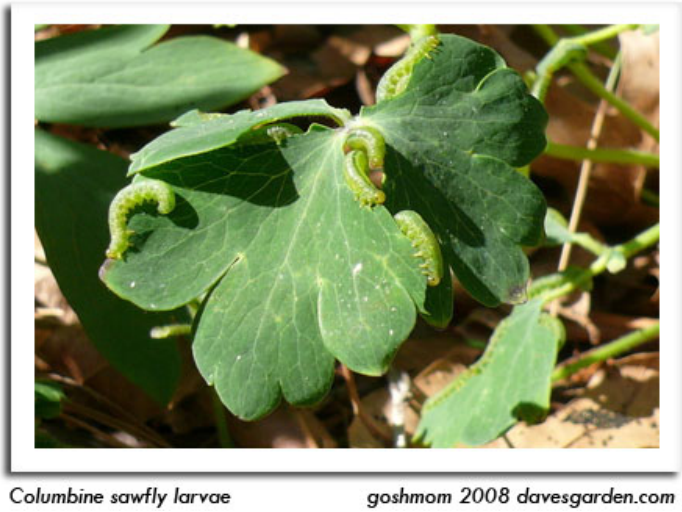
Anthracnose on sycamore *Marcia Wensing DATCP*

NON-VIABLE NURSERY STOCK: Most nursery plants that have not leafed out by now are considered non-viable and cannot be sold. Dry bulbs and trees and shrubs with plastic-wrapped roots are especially prone to moisture deficiency problems after distribution to retail stores and should be sold within three weeks of arrival. Non-viable stock may be set aside and observed for later growth, but otherwise must be destroyed or returned to the supplier.

COLUMBINE LEAFMINER: Leaf mines caused by the larval stages of this insect were noted this week on columbine in a Waukesha County garden center. The serpentine mines initially appear whitish in color and eventually turn tan or brown later in the season. Removing and destroying infested leaves will reduce this aesthetic problem.

Columbine leafminer *Tim Boyle DATCP*

COLUMBINE SAWFLY: Another columbine pest, the columbine sawfly, was also observed during recent garden center inspections. The green larvae with dark heads were found on columbine 'Clementine Dark Purple' in Jefferson County. Their characteristic pattern of feeding begins at the leaf edges and progresses inward until all leaf tissue except the midveins has been consumed. This spring pest is present from mid-May through early June. Removing the larvae and infested leaves by hand is the preferred form of control, but insecticidal soaps are also effective. Columbine plants usually recover from the feeding injury.



Columbine sawfly larvae *goshmom 2008 davesgarden.com*

APPLE INSECT & BLACK LIGHT TRAP COUNTS MAY 30 - JUNE 5

COUNTY	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	AM RED[5]	YELLOW[6]
Bayfield	Keystone	11	35	0	0		
Bayfield	Orienta	0	0	—	0		
Brown	Oneida	*900	*41	*28	*0		
Chippewa	Chippewa Falls	—	30	3	0		
Columbia	Rio	0	4	21	0		
Crawford	Gays Mills	—	—	—	—		
Dane	Deerfield	0	2	0	0		
Dane	McFarland	0	15	5	7		
Dane	Mt. Horeb	1	0	1	0		
Dane	Stoughton	7	0	18	0		
Dane	West Madison	0	0	0	4		
Fond du Lac	Campbellsport	17	6	0	0		
Fond du Lac	Malone	3	1	4	0		
Fond du Lac	Rosendale	12	7	1	—		
Green	Brodhead	0	0	5	0		
Iowa	Mineral Point	2	0	13	—		
Jackson	Hixton	21	6	1	0		
Kenosha	Burlington	25	1	3	0		
Marathon	Edgar	28	101	3	3		
Marinette	Niagara	40	9	0	0		
Marquette	Montello	10	0	0	0		
Ozaukee	Mequon	5	4	10	0		
Pierce	Beldenville	146	19	8	0		
Pierce	Spring Valley	24	33	0	0		
Polk	Turtle Lake	66	27	2	0		
Racine	Raymond	582	1	4	0		
Racine	Rochester	8	2	7	0		
Richland	Hillpoint	77	0	10	0		
Sheboygan	Plymouth	—	—	—	—		
Walworth	East Troy	3	2	0	—		
Walworth	Elkhorn	4	3	1	—		
Waukesha	New Berlin	60	2	15	0		

[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; *Counts represent a two-week total.

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	—	—	—	—	—	—	—	—	—	—
Crawford	Prairie du Chien	0	0	0	0	0	0	0	0	0	0
Dane	Mazomanie	0	4	3	0	0	0	5	0	2	0
Fond du Lac	Ripon	0	25	0	0	0	0	0	0	0	0
Manitowoc	Manitowoc	—	—	—	—	—	—	—	—	—	—
Marathon	Wausau	0	8	0	0	0	0	8	0	0	0
Monroe	Sparta	0	1	0	0	0	0	1	0	0	0
Portage	Plover	—	—	—	—	—	—	—	—	—	—
Rock	Janesville	0	35	0	0	0	0	5	0	0	0
Walworth	East Troy	—	—	—	—	—	—	—	—	—	—
Wood	Marshfield	0	16	0	0	0	0	2	0	2	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.