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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
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WEATHER & PESTS

A cooler and wetter than normal weather pattern continued in Wisconsin during the second week of June. Seasonally warm, humid conditions departed on Sunday with an approaching cold front, and markedly lower temperatures accompanied by showers and storms arrived. Highs on June 12 only reached the low to mid-60s, about 15 degrees below average for this time of year. The unsettled weather interrupted fieldwork, and slowed emergence and growth of late-planted crops. Corn, oat and soybean planting continued to lag the 5-year average by two weeks, while the first cutting of alfalfa was eight days behind normal, with many producers reporting reduced quality and low yields. At Madison, the degree-day accumulation (modified base 50°F) as of June 12 was 632, which is 139 degree day units or approximately eight calendar days later than last year and 110 degree days behind the 30-year average. The incessantly wet conditions and below-normal temperatures this spring have resulted in unprecedented planting and crop developmental delays.

LOOKING AHEAD

TRUE ARMYWORM: Another very large capture of 1,110 moths was reported from the Janesville black light trap site during the week ending June 13, and minor feeding damage is appearing on plants in the perimeter rows of corn. The recent heavy local moth flights suggest that more concentrated scouting of corn, oats and wheat should begin at this time. High populations of true armyworm larvae are more likely to develop in cool, wet years.

EUROPEAN CORN BORER: Moths are depositing eggs on vegetables at southern and central locations where 450 degree days (modified base 50°F) have been surpassed. Snap beans, peppers, potatoes and various weed hosts will be used for oviposition since corn taller than 18 inches is not widely available. The first ECB flight is expected to peak by June 20 in south-central and southwestern Wisconsin.

EURASIAN HEMP BORER: A substantial moth flight is underway in the Delavan area of Walworth County. Moths have become abundant in the past two weeks and heavy egg laying is expected. A report from a local hemp grower indicates the moths are diurnal and cannot be monitored with black light or sticky traps, thus routine scouting of hemp plants is the only effective approach to determining the need for EHB control.

CODLING MOTH: The spring flight continued for the second week, following delayed emergence due to unseasonably low temperatures. Orchards that recorded the biofix on May 31-June 2 have accumulated about 140-180 degree days (modified base 50°F) as of June

12. For most sites where the flight has been inconsistent, controls directed against first-generation larvae will be well timed if applied 350 degree days after the biofix date. Based on forecasted temperatures, the treatment window should open by June 22-24 for southern orchards.

CORN EARWORM: Last week's active weather carried a few early corn earworm migrants into southern Wisconsin. Nine specimens were registered at Janesville from May 30-June 5 and nine more moths were collected this week. Corn is not at a critical growth stage for corn earworm damage to occur, but other favored vegetable hosts include asparagus, cabbage, cantaloupe, cucumber, eggplant, lettuce, lima bean, melon, okra, pea, pepper, potato, pumpkin, snap bean, spinach, squash, sweet potato, and watermelon.

LILY LEAF BEETLE: This newly-established invasive red beetle is appearing in the Mosinee and Stevens Point areas. Portage County is currently the southernmost Wisconsin county in which the lily leaf beetle is known to occur. The northernmost record of the beetle is from Merrill in Lincoln County. Lily leaf beetle was first discovered in the state in 2014 near Kronenwetter and Mosinee in Marathon County. Recommended controls include manually picking the adults and larvae from lilies or applying an insecticide labeled for use on ornamental plants. More than one application may be needed.

Lily leaf beetle *Nancy Armstrong-Thomson flickr.com*

DEGREE DAYS JANUARY 1 - JUNE 12

LOCATION	50°F	2018	NORM	40°F
Dubuque, IA	717	930	757	1345
Lone Rock	656	806	—	1236
Beloit	655	782	766	1237
Sullivan	577	697	700	1115
Madison	632	771	727	1217
Juneau	528	718	—	1046
Racine	476	598	—	991
Waukesha	539	632	—	1071
Milwaukee	488	625	603	1011
Hartford	518	676	—	1031
Appleton	473	690	—	971
Green Bay	448	661	605	938
Big Flats	520	744	—	1041
Hancock	484	675	712	982
Port Edwards	492	682	691	984
La Crosse	588	858	805	1166
Eau Claire	552	784	711	1073
Cumberland	438	631	635	864
Bayfield	315	520	—	692
Wausau	406	613	622	824
Medford	406	608	557	817
Crivitz	431	644	—	879
Crandon	389	573	496	787

Method: Modified B50; Modified B40 as of January 1, 2019. NORMALS based on 30-year average daily temps, 1981-2010.

FORAGES & GRAINS

ALFALFA WEEVIL: Larval counts have been low in first-crop alfalfa. Surveys in Clark, Marathon, Portage, and Waupaca counties on June 10 and 11 found no more than 10% leaf tip feeding and 0.6 larvae per sweep, with an average of 0.2 per sweep. In fact, sampling of 200 first-crop fields since late May yielded an overall average of just 0.25 per sweep, or 25 per 100 sweeps. Leaf tip feeding has not exceeded 20% in any field checked by DATCP this spring. The peak weevil damage period would normally occur from 600-800 degree days (base 48°F), but nearly all fields will have been harvested before the lower range of this threshold is reached.

PLANT BUG: Nymphs are now more abundant than the adults in most fields. Counts for the week ending June 13 were less than one per sweep and averaged 0.3 per sweep, which is very low in comparison to the 5.0 per sweep economic threshold.

POTATO LEAFHOPPER: Surveys in the north-central and central areas found low counts of 0.02-0.5 leafhoppers per sweep in remaining first-crop fields. Economic populations of 1.0 per sweep for alfalfa 8-11 inches and 2.0

per sweep for fields 12 inches or taller have not been recorded by DATCP surveyors as of June 13.

PEA APHID: Densities are typical for early June at approximately 2-4 aphids per sweep, with a few exceptional fields having higher counts of 10-20 per sweep. Counts of this level are far below the 100-per-sweep threshold for alfalfa. The appearance of winged aphids in the past two weeks signals that scouting should begin in pea fields, where the threshold is much lower at 35 aphids per sweep or two per plant. For alfalfa, harvesting fields on time is usually the most effective aphid control.

CORN

EUROPEAN CORN BORER: The spring flight of moths continued for the second week, with very low counts of 1-10 moths registered in black light traps near Arlington, East Troy, Janesville, Pardeeville, Ripon and Sparta. The European corn borer degree day model suggests that peak moth emergence is approaching near Beloit, Madison and La Crosse, and should occur by June 20.

European corn borer moth *woodcreeper flickr.com*

BLACK CUTWORM: Conditions remain favorable for localized cutworm infestations. Crop advisors and growers should continue to inspect fields until corn plants have reached the five-leaf (V5) stage. Signs of cutworm activity have been encountered in a few fields surveyed this mon-th, though economic infestations (>3% of plants damaged) have not been observed. The cumulative moth count for the period of April 4-June 1 was 1,258 moths in 44 traps, with a high of 80 moths near Dodgeville in Iowa County. Cooperators may remove their traps now that the DATCP BCW trapping program has ended for 2019.

STALK BORER: Migration of larvae from grassy areas into corn has started and is expected to increase in the week ahead. Spot checking the 4-6 border rows for plants with holes in the leaves, wilted whorls and other early signs of damage is recommended beginning at 1,400 degree days (sine base 41°F). Spot treatment may be in order for fields with infestations affecting 5% or more of plants.

Stalk borer larva *Krista Hamilton DATCP*

SOYBEANS

SOYBEAN APHID: Surveys conducted in Dane, Green, Jackson, La Crosse, Monroe, Rock, Trempealeau and Walworth counties found no soybean aphids as of June 13. The first soybean aphids of the growing season are likely to appear in fields during the week of June 16-22.

Soybean aphids on newest soybean growth *Krista Hamilton DATCP*

BEAN LEAF BEETLE: Light defoliation was observed in nearly all the soybean sites surveyed in the south-central counties, though fewer than 5% of the plants were affect-

ed in most fields and beetle counts were very low. Chemical control of this pest during the soybean vegetative stages should be considered only if fieldwide defoliation levels exceed 40% or if populations of 39 or more beetles per foot of row are observed. Economic soybean damage directly resulting from bean leaf beetle feeding has never been documented in Wisconsin.

Bean Leaf Beetle Tracy Schilder

FRUITS

CODLING MOTH: The spring flight continued for the second week, with 10 monitoring locations registering economic counts of five or more moths per trap. Egg deposition has intensified and growers should begin preparations for initial CM treatments. Apple orchards that established the biofix from May 31-June 1 are likely to accumulate 350 degree days (modified base 50°F) from the biofix date around June 20-24. This is the window during which insecticidal controls should be applied.

OBLIQUEBANDED LEAFROLLER: Apple growers planning reduce the number of codling moth larvicide treatments this spring should set additional OBLR traps to determine the potential for problems by second-generation larvae at harvest. There is no established threshold for OBLR based on trap counts, but according to John Aue of Threshold IPM Services, an OBLR larvicide may be needed if trap counts exceed 50 moths per week.

SAN JOSE SCALE: A few more days remain for apple growers to tape scaffold branches to monitor for crawlers. Concentrating the tape on younger limbs (2-3 inches in diameter) in blocks with a history of SJS damage is advised. A 10x hand lens is required to view the oval, bright-yellow crawlers. A capture of 10-15 crawlers in a few days or 10 crawlers on one tape may warrant control.

San Jose scale crawlers www.organicgardeninfo.com

ROSE CHAFER: These tan beetles with orange-brown spiny legs are expected to appear in vineyards and orchards in the week ahead. Scouting twice weekly is advised for vineyards on sandy soils and those with a history of rose chafer problems once the first beetle is observed. An average of two beetles per vine has been suggested as the basis for initiating controls, although the feeding period is usually brief (<3 weeks) and the beetles usually disappear by July without causing permanent damage.

Rose chafer beetles Krista Hamilton DATCP

TARNISHED PLANT BUG: Nymph production has started in the south-central and southwestern counties. Strawberry plants beginning to bloom should be sampled once a week for both adults and nymphs. Controlling the smallest nymph stages is most effective. The economic

threshold for this insect in strawberries is four adults per 20 sweeps at first flower bud formation or one nymph in four flower clusters.

GRAPE PHYLLOXERA: The appearance of leaf galls suggests that monitoring for egg hatch should begin. Control of the first generation is usually ineffective once the galls have formed, but scouting for the mobile crawlers will help to determine the timing and need for management of the second and third generations later this season. As is the case with San Jose scale, a 10x hand lens is required to view the crawlers.

Grape phylloxera galls universitydisplaygardens.com

VEGETABLES

VARIEGATED CUTWORM: Larvae were found in two Jackson County cornfields earlier in the week. This sporadic pest, which last appeared in record numbers in 2012, is one of the most damaging cutworms on beans, potato and tomato. The caterpillars noted near Melrose were approximately ¾-inch long on June 11.

POTATO LEAFHOPPER: Recent harvesting of first-crop alfalfa has likely driven leafhoppers into nearby vegetable crops. Commercial potato and snap bean fields may be monitored with a standard 15-inch sweep net by taking 25 sweeps per site, sampling from at least five sites per 30 acres. Counting nymphs and adults by turning over 25 leaves from the middle of the plant is the protocol for gardens or smaller-acreage farms. Recommended treatment thresholds for potatoes are one adult per net sweep or an average of 2.5 nymphs and adults on the undersides of 25 potato leaves. In snap beans, the threshold is 0.5 adults and nymphs per sweep for seedlings, and one leafhopper per sweep for larger plants in the third trifoliate to bud stages.

Potato leafhopper plantnexgrow.com

STRIPED CUCUMBER BEETLE: Cucumbers, melons and other vine crops will be at risk of feeding injury and bacterial wilt transmission as beetles continue to emerge this month. Bacterial wilt infection can develop when only 10% of the population are carriers of the pathogen. Scouting field edges and interiors two times per week is recommended. Beetle counts in excess of 4-5 per 50 plants may warrant control.

Striped cucumber beetle Krista Hamilton DATCP

IMPORTED CABBAGEWORM: Larvae have emerged statewide and are appearing on cabbage, cauliflower and broccoli leaves. Manual removal of the caterpillars is suggested for smaller gardens, while treatment with a product containing the bacterial insecticide *Bacillus thuringiensis* (Bt) subspecies *aizawi* (Agree, Xentari) or subspecies *kurstaki* (Biobit, Cutlass, DiPel, Javelin,

Lepinox, MVP, Thuricide) can be considered for larger production fields. Bt is most effective against small larvae and may not control larger, full-grown caterpillars. Most Bt products persist on plants only a few days and must be reapplied if small larvae are actively feeding.

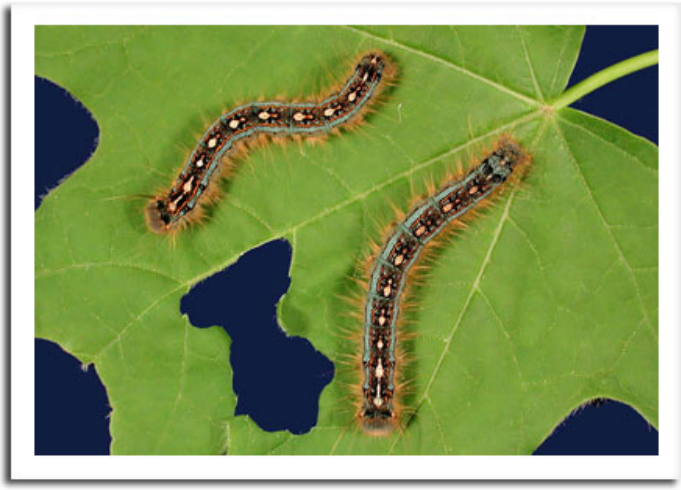
Imported cabbageworm larvae *www.insectpod.com*

NURSERY & FOREST

OAK LEAF BLISTER: Leaf blisters indicative of this fungal disease are appearing on many oaks in the white and red groups at nurseries in southern Wisconsin. Disease development is favored by cool, wet spring conditions. Treatment is not recommended since the blisters are primarily cosmetic and do not adversely affect tree health. However, in special circumstances, a protective fungicide applied prior to infection in the spring can be an effective control.

Oak leaf blister *Shanon Hankin DATCP*

FOREST TENT CATERPILLAR: DNR Forest Health specialists report that forest tent caterpillar egg surveys conducted in northern counties indicate low populations are expected this season, continuing a 16-year trend. The last tent caterpillar outbreak occurred in northern Wisconsin from 1999-2002. Cooler and wetter than average spring weather may indirectly reduce caterpillar populations by enhancing the activity of pathogenic fungi. Noticeable defoliation should be reported to one of the DNR's regional forest specialists.



Forest tent caterpillars *www.vtfpr.org*

COLUMBINE LEAFMINER: Leaf mines caused by the larval stages of this insect were noted this week on columbine in La Crosse County. 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*

FLETCHER SCALE: Mobile crawlers are expected to appear soon in advanced southern areas of the state. This scale pest of arborvitae, juniper and yew can cause yellowing,

premature needle drop or branch dieback. For severe infestations, horticultural oils or soaps, insect growth regulators, or appropriately-labeled conventional insecticides may be used as soon as the crawlers are noticed.

Fletcher scale on arborvitae *Konnie Jerabek DATCP*

DOGWOOD ANTHRACNOSE: This disease of dogwood has been found by nursery inspectors in southwestern Wisconsin. Symptoms include leaf blotches with tan centers and purple-red margins that appear on the leaves and flowers. The leaves killed by anthracnose remain attached to the plant by the petiole through the fall and winter. This pathogen is also capable of spreading to the stem causing cankers. Rain splash is considered to be a main cause of spore dispersal.

Management recommendations include avoiding overhead watering, and removing and disposing of all infected leaves and stems. Proper tool sanitation measures should be applied when removing infected tissue to limit its spread. Preventative fungicides can be applied in the spring as a series of applications. Resistant cultivars are available.

APPLE INSECT & BLACK LIGHT TRAP COUNTS JUNE 6 - 12

COUNTY	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	DWB[5]	LPTB[6]	BIOFIX[7]	AM RED[8]	YELLOW[9]
Bayfield	Keystone	23	21	0	2		0			
Bayfield	Orienta	5	1	—	—		0			
Brown	Oneida	400	15	4	0		—			
Columbia	Rio	4	0	8	0	3	7			
Crawford	Gays Mills	83	7	1	—		32			
Dane	DeForest	—	—	—	—		—			
Dane	Mt. Horeb	1	0	4	1		0			
Dane	Stoughton	2	23	3	4		5	**June 1**		
Fond du Lac	Campbellsport	70	13	0	0		8			
Fond du Lac	Malone	6	2	5	0	34	13	**June 7**		
Fond du Lac	Rosendale	14	2	3	2		3			
Grant	Sinsinawa	—	—	—	—		—			
Green	Brodhead	—	—	—	—		—			
Iowa	Mineral Point	1	0	25	14		4	**May 31**		
Jackson	Hixton	30	5	7	0		0			
Kenosha	Burlington	18	0	8	5					
Marathon	Edgar	202	38	5	0		5			
Marinette	Niagara	10	10	0 MD	0		0			
Marquette	Montello	33	29	7	0		19	**June 2**		
Ozaukee	Mequon	5	1	8	0		0			
Pierce	Beldenville	6	8	18	0		1	**June 1**		
Pierce	Spring Valley	27	17	1 MD	0		13			
Racine	Raymond	—	—	—	—		—			
Racine	Rochester	0	1	15	0	1	2			
Richland	Hill Point	7	3	13	0		26	**June 1**		
Sheboygan	Plymouth	33	3	0	1		9			
Walworth	East Troy	10	4	0 MD	2		3			
Walworth	Elkhorn	8	8	0 MD	4		1			
Waukesha	New Berlin	—	—	—	—		—			

[1]Spotted tentiform leafminer; [2]Redbanded leafroller; [3]Codling moth; [4]Obliquebanded leafroller; [5]Lesser peachtree borer; [6]Dogwood borer; [7]Brown marmorated stink bug; [8]Apple maggot red ball; *Unbaited; **Baited; [9]Apple maggot yellow board; MDMating disruption.

COUNTY	SITE	BCW[1]	CEL[2]	CE[3]	DCW[4]	ECB[5]	FORL[6]	SCW[7]	TA[8]	VCW[9]	WBC[10]
Columbia	Arlington	0	0	0	0	1	1	0	39	2	0
Columbia	Pardeeville	0	0	0	0	10	0	1	29	0	0
Dodge	Beaver Dam	0	2	0	0	0	1	6	29	0	0
Fond du Lac	Ripon	0	1	0	0	3	0	0	8	0	0
Grant	Prairie du Chien	—	—	—	—	—	—	—	—	—	—
Manitowoc	Manitowoc	1	2	0	0	0	4	2	23	0	0
Marathon	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	Sparta	0	0	0	0	6	1	0	3	0	0
Rock	Janesville	1	6	0	0	6	3	23	1110	6	0
Walworth	East Troy	5	0	0	0	3	0	0	3	0	0
Wood	Marshfield	0	6	0	0	0	1	1	22	0	0

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