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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

Mild, showery weather occurred across the state, maintaining adequate to locally excessive levels of moisture for crops and causing fieldwork delays. Mostly cloudy skies persisted throughout the week and precipitation was above average. High temperatures ranged from the 60s in northern and far eastern areas to the lower 90s in the south. Severe thunderstorms associated with a warm front on June 21 produced isolated tornadoes, damaging winds and very heavy rainfall that led to many reports of flooding. The National Weather Service confirmed that 3-4 inches of rain fell in Milwaukee and Waukesha counties during a period of 20 minutes, causing urban flooding and numerous road closures. Storms also developed over the southern, central and western areas, and two tornadoes were documented in Green Lake and Fond du Lac counties. The strongest storms and most extensive crop damage occurred in the southeast.

LOOKING AHEAD

EUROPEAN CORN BORER: The treatment window for first generation larvae has opened near Beloit, La Crosse, Madison, Spring Green and other advanced southern and west-central locations. Close inspection of susceptible corn fields and Bt refuge areas is advised during the next 2-3 weeks to determine the percentage of infested whorls and the need for control. Conventional or organic treatments directed against the early development stages must be applied before larvae bore into the corn stalks and midribs.

CORN ROOTWORM: Research indicates that 50% of overwintered eggs will have hatched between 684 and 767 degree days (base 52°F), or from June 26-July 2 near Janesville and Madison. Evidence of root injury should become noticeable in heavily infested fields next month. The first beetles ordinarily appear around July 4.

APPLE MAGGOT: Degree day accumulations are appropriate for fly emergence. Red sphere and yellow sticky traps should be placed at this time to detect the earliest adults. The treatment threshold remains at five flies per trap per week for traps enhanced with an ammonia lure and one fly per trap per week for unenhanced traps.

SOYBEAN APHID: Densities remain below 5-10 per plant and the aphids have dispersed to no more than 10% of plants in most fields. The low populations observed may be associated with seed-applied insecticides, most of which have a suppressive effect for about 60 days after planting. All soybean fields, seed-treated or otherwise, will require routine scouting beyond the first week of July.

WESTERN BEAN CUTWORM: The annual trapping survey is now in progress and the results derived over the

next eight weeks are expected to reveal peak emergence, potential problem areas, and any significant changes in the state moth count. A few early moths could begin collecting in pheromone traps during the last week of June.

JAPANESE BEETLE: A report from the UW-Madison Insect Diagnostic Lab verifies that beetles are emerging in Dane County. Damage to fruits, perennials, nursery stock and field crops is anticipated later this month and throughout July, particularly in the generally infested southeastern and south-central areas of the state.

Japanese beetles *audreyajones flickr.com*

DEGREE DAYS JANUARY 1 - JUNE 22

LOCATION	50°F	2010	NORM	48°F	40°F
Dubuque, IA	906	1120	—	870	1607
Lone Rock	853	1085	—	825	1533
Beloit	918	1179	—	876	1631
Madison	800	1050	917	787	1459
Sullivan	809	1096	918	793	1472
Juneau	745	1030	—	740	1379
Waukesha	662	959	—	675	1278
Hartford	646	930	—	655	1244
Racine	579	892	—	597	1181
Milwaukee	568	865	750	581	1152
Appleton	617	919	802	637	1192
Green Bay	537	807	770	570	1096
Big Flats	673	968	—	663	1260
Hancock	670	986	919	654	1259
Port Edwards	646	930	857	641	1219
La Crosse	801	1076	993	789	1464
Eau Claire	700	962	881	717	1300
Cumberland	619	863	833	630	1179
Bayfield	389	625	594	395	873
Wausau	586	848	787	593	1117
Medford	604	847	701	603	1140
Crivitz	513	782	—	520	1049
Crandon	518	767	659	519	1017

Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2011. NORMALS based on 30-year average daily temps, 1971-2001.

FORAGES

ALFALFA WEEVIL: Larvae are common but not numerous in second crop alfalfa. The average count in the past week was 0.5 per sweep and leaf feeding ranged from 5-30%. Damage is expected to subside by early July as the remaining third and fourth instar larvae enter the non-feeding pupal stage.

POTATO LEAFHOPPER: Numbers have not changed significantly since the last report. Representative counts in the south-central, central and east-central areas range from 0.1- 0.6 per sweep, with an average of 0.2 per sweep. As of June 22, economic populations have not been encountered in alfalfa.

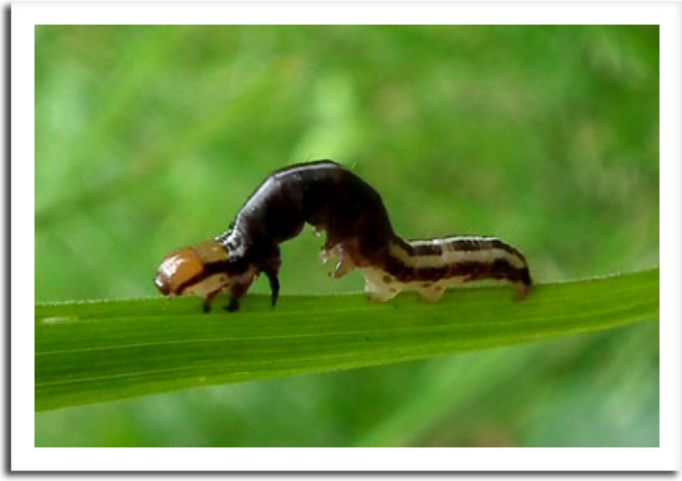
PLANT BUG: Alfalfa fields are showing moderate populations of 1.5-2.9 per sweep, but all surveyed fields in the southern and central areas had counts below the economic threshold of 5.0 per sweep. Nymphs are more abundant than adults in most fields.

CORN

EUROPEAN CORN BORER: The spring flight has peaked and is now declining in the southern and central areas. Larvae resulting from the flight are in the early instar stages and fresh whorl-feeding injury is evident in a few scattered corn fields. Surveys conducted in Columbia, Dodge, Grant, Green, Iowa and Rock counties found very light infestations of 2-5% in 4 of 30 fields examined in the past week. The optimal application window for first generation corn borers has opened in the southernmost areas of the state with the accumulation of 800 degree days (base 50°F).

STALK BORER: Reports indicate that 1-6% of edge row plants in several Columbia, Grant and Rock County corn fields are infested with small, ¼ - 1 inch larvae. This pattern is consistent with the stalk borer, a mid-season pest that migrates from perennial grasses and broadleaf weed

hosts in early June and infests the first 4-6 rows of corn. As a reminder, Bt corn hybrids suppress but will not completely control stalk borers, so field scouting is recommended through the V7 stage.



Stalk borer larva *jclucier flickr.com*

TRUE ARMYWORM: Light injury was observed in 14% of corn fields sampled from June 16-22. This should serve as an indication for crop advisors and growers to continue inspection of corn and small grains for developing problems. Treatment of corn is suggested when 25% of plants are infested with two or more small larvae (¾ inch or shorter) or 75% of the plants are infested.

CORN EARWORM: Several early moths are appearing in pheromone traps. Counts have been less than 25 per trap in the last week and no significant injury to early sweet corn has been reported or observed. Commercial and fresh market sweet corn growers should remain attentive for egg laying and larval injury through early July.

SOYBEANS

SOYBEAN APHID: Examination of 28 fields in the past week found that aphids have dispersed to fewer than 10% of the plants at approximately 21% of surveyed sites. Densities remain below 10 aphids per plant and 29 per infested plant. Small colonies are appearing in a greater percentage of soybean fields and have been detected thus far in Columbia, Dane, Dodge, Grant, Green Lake, La Crosse, Monroe, Sauk, Vernon and Waukesha counties.

BEAN LEAF BEETLE: Defoliation ranging from 5-10% was noted on 50-100% of plants in several fields checked in Columbia, Dodge and Green Lake counties. Despite widespread feeding injury, very few beetles could be found and treatment was not warranted. Several other fields in the south-central and southwest areas also showed light defoliation. Treatment should be considered for infestations of 39 beetles per foot of row or defoliation in excess of 40% per plant throughout the field.

SMALL GRAINS

CEREAL LEAF BEETLE: Defoliation of wheat was observed late last week in the east-central area. In Sheboygan County, it is reported that as many as 40% of the flag leaves were damaged in two adjacent fields. The infestations were localized and no other significant damage was found in Dodge, Fond du Lac and Manitowoc counties.

Leaf feeding injury by cereal leaf beetle larvae *Adrian Barta DATCP*

FRUITS

SPOTTED TENTIFORM LEAFMINER: The second of three flights this season has begun in southern Wisconsin, where trap counts ranged from 1-210 moths per trap from June 16-22. Peak flight activity can be expected at 1,150 degree days (base 50°F), or approximately July 4 near Beloit, July 11 near Madison, and July 15 at La Crosse. The economic threshold increases from 0.1 to 1.0 mine per leaf for the second generation of sapfeeder larvae.

ROSE CHAFER: Beetles are especially prevalent in the central and west-central portions of the state. The tan scarabs are common in many yards and home gardens, where they are skeletonizing the leaves of perennials

and shade trees. Similar to the Japanese beetle, this pest feeds on a wide variety of plants, including apple, cherry, corn, dahlia, elder, elm, foxglove, grape, hollyhock, hydrangea, pear, peony, rose, Virginia creeper, wisteria and many other agricultural and ornamental crops.

Rose chafer beetle *Krista Hamilton DATCP*

CODLING MOTH: The first flight has peaked in southern and central orchards, although counts remain high at many sites. Economic counts of 5 or more moths per trap per week were registered in 15 of 27 apple orchards during the June 16-23 reporting period. Egg hatch is 50% complete over the southern half of the state.

REDBANDED LEAFROLLER: Pheromone trap counts are likely to increase in the week ahead as the second flight begins. Trap counts were very low in the past week, ranging from 0-32, with an average of 3.4 moths per trap.

VEGETABLES

SQUASH VINE BORER: The adult emergence period is expected to begin next week in the southern areas. Pumpkins, squash and other vine crops should be examined for eggs and evidence of feeding from 900-1,000 degree days (base 50°F). Insecticidal controls must be applied before the larvae bore into vines in order to be effective.

CABBAGE CATERPILLARS: Commercial cabbage growers and home gardeners have reported very few problems thus far. Larvae of the imported cabbageworm and diamondback moth are expected to appear in greater numbers before month's end and regular monitoring should begin soon. Cabbage looper moths have not been observed as of June 22.

LATE BLIGHT: Reports of late blight in Wisconsin have not been received yet this season, but degree day accumulations and weather conditions are favorable for disease development. Home gardeners, whether conventional or organic, should take appropriate measures now to protect their tomatoes and potatoes. Conventional fungicides may be applied this weekend, while copper sprays (for organic growers) are advised once late blight has been confirmed in the county.

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 larval populations.

POTATO LEAFHOPPER: Nymph production has not yet intensified. Surveys and reports suggest that populations are still comparatively low in Adams, Portage and Waushara counties. Alfalfa harvest often forces large numbers of leafhopper into snap beans and potatoes, but this has not been an issue in the Central Sands area. Recommended treatment thresholds for potatoes are 1.0 adult per net sweep or 15 nymphs on the undersides of 50 potato leaves. In snap beans, the threshold is 0.5 per sweep for seedlings and 1.0 per sweep for plants in the third trifoliate to bud stages.

WEEDS

THISTLES: Canada and musk thistles are flowering in the southeastern counties and presumably throughout the southern half of the state. Both species are invasive in pasture settings. Mechanical removal or herbicide spot applications can reduce populations, but either method must be repeated for several years in a row to achieve long-term control.

SOYBEAN WEEDS: Surveys continue to suggest that timely weed management has been a problem for growers this spring. Optimal timing of herbicide treatments is within the 4-6 weeks after soybean emergence. In years such as this one, when weed management is complicated by high winds, periodic rain and later planting dates, yield reductions due to weed competition are more prevalent. The most common species observed in the past week were giant ragweed, common ragweed,

common lambsquarters, redroot pigweed, ladysthumb smartweed, and several species of grasses.

NURSERY & FOREST

BRISTLY ROSE SLUG: The green, bristly larvae of this sawfly are feeding on the undersides of rose foliage in Columbia, Kewaunee, Portage and St. Croix counties, skeletonizing the leaves. Defoliation may be reduced by manually removing the larvae and infested leaves. Horticultural oil or residual insecticides are also effective.

CEDAR-HAWTHORN RUST: Hawthorns in a Waukesha County nursery were exhibiting the bright orange leaf spots characteristic of this fungal disease, which also infects apple, crabapple and occasionally pear and serviceberry. Severe infection may cause yellowing and premature leaf drop. Selecting resistant hawthorn cultivars and fungicide applications made at budbreak are the recommend controls. Removal of alternate juniper hosts from the surrounding area is impractical since the spores can be wind-dispersed to hawthorns as far as 15 miles away.

Cedar hawthorn rust *Liz Meils DATCP*

GRAFT INCOMPATIBILITY: 'Fall Fiesta' maples in a Polk County nursery field were displaying withered, dead leaves and severe dieback of the current year's growth, symptoms attributed to graft incompatibility. According to the nursery owner, the maples were transplanted in 2010 and problems became evident this spring. Closer inspection of the affected trees revealed bark decay near the graft union between the scion cultivar and rootstock. Extreme cold winter temperatures may have been another contributing factor.

GUIGNARDIA LEAF BLOTCH: This leaf spot disease is developing on horse chestnut and buckeye trees in Milwaukee County. Symptoms include irregular, reddish-brown leaf lesions with yellow margins that distort foliage as they increase in size and severity. Disease development can be suppressed by disposing of fallen leaves in autumn to reduce inoculum levels.

Guignardia leaf blotch on buckeye *Liz Meils DATCP*

HOLLYHOCK RUST: Nursery inspectors report this disease is spreading rapidly under favorable damp conditions. Diagnostic characteristics are the small, yellow pinspots on the leaves, orange-brown rust pustules, and wilt. Rust symptoms increase in severity as the season progresses, killing most foliage on infected plants by late summer. The flowers are generally not affected.

Control involves removing symptomatic leaves in spring as soon as they are observed. Older infected plants should be cut down and burned once flowering is complete. The common weed, round-leaf mallow can harbor the fungus, so thorough weeding may be helpful. Fungicides are also available for control. Spraying should begin at the first sign of disease and continue at recommended intervals.

APPLE INSECT & BLACK LIGHT TRAP COUNTS JUNE 16 - 22

COUNTY	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	OBLR[5]	AM RED[6]	YELLOW[7]	GDD 50°F
Bayfield	Keystone	0	0	0	0				
Bayfield	Orienta	1	0	0					
Brown	Oneida	0	0	10	15				
Chippewa	Chippewa Falls	0	0	12	1	0	0	0	713
Columbia	Rio	0	0	4	6				
Dane	Deerfield	—	—	—	—				
Dane	Mt. Horeb	0	6	0	6		0	0	
Dane	McFarland	—	—	—	—				
Dane	Stoughton	32	7	8	5	2			717
Dane	West Madison	10	0	8	3				
Fond du Lac	Campbellsport	1	0	0	4				
Fond du Lac	Malone	2	0	5	21				
Fond du Lac	Rosendale	5	9	3	1		0		
Grant	Sinsinawa	12	27	16	4				
Green	Brodhead	23	32	1	8	1	0	0	
Iowa	Mineral Point	80	5	4	2				732
Jackson	Hixton	—	—	—	—				
Kenosha	Burlington	25	0	5	21				586
Marinette	Niagara	6	—	14	18				485
Marquette	Montello	80	1	1	10				714
Ozaukee	Mequon	0	0	5	2				567
Pierce	Beldenville	0	0	14	1	3			
Pierce	Spring Valley	0	0	8	7	1			
Polk	Turtle Lake	0	0	4	5		0	0	654
Racine	Raymond	7	0	20	10				
Racine	Rochester	210	0	6	21			0	638
Richland	Hillpoint	40	0	10	17	0			
Sheboygan	Plymouth	0	0	10	5				
Walworth	East Troy	5	3	1	2				
Walworth	Elkhorn	4	0	1	3				
Waukesha	New Berlin	18	0	21	22		0	0	

[1]Spotted tentiform leafminer; [2]Redbanded leafroller; [3]Codling moth; [4]Obliquebanded leafroller EASTERN; [5]Obliquebanded leafroller WESTERN; [6]Apple maggot red ball; *Unbaited AM trap; **Baited AM trap; [7]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]
Columbia	Arlington	0	32	0	0	0	0	5	0	1	0
Dane	Mazomanie	0	2	0	2	0	0	2	0	1	0
Grant	Prairie du Chien	7	1	0	1	0	0	0	0	0	0
Manitowoc	Manitowoc	0	46	2	21	0	0	0	0	0	0
Marathon	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	Sparta	—	—	—	—	—	—	—	—	—	—
Rock	Janesville	1	28	0	1	0	0	7	0	2	0
Walworth	East Troy	50	—	—	—	—	—	—	—	—	—
Wood	Marshfield	13	23	3	26	0	2	5	0	3	0
Vernon	Coon Valley	—	—	—	—	—	—	—	—	—	—

[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.