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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

Dry weather persisted as crops continued through the latter stages of reproduction. Minimal precipitation fell across the state during the week, although a few eastern Wisconsin locations such as Green Bay, Kenosha and Racine recorded 0.5-1.0 inches of rain on August 2 and 3. Growing conditions for Wisconsin crops remained mostly favorable, despite developing short-term dryness and localized hail damage resulting from severe early-week thunderstorms. Reproductive-to-filling soybeans continued to advance under below-normal temperatures and a lack of heat stress, and 49% of the crop was setting pods at the start of the week, a 21% increase over last week and 11 points ahead of the five-year average. Condition ratings for corn declined by two percentage points, but 80% of the crop is in the good to excellent category, eight percentage points better than the same time last year.

LOOKING AHEAD

WESTERN BEAN CUTWORM: The annual flight is now 50-100% complete statewide. As of August 5, the cumulative count is 551 moths in 97 traps, or approximately six per trap. The 2015 preliminary total has surpassed last year's final count of 521 moths collected in 108 traps (five per trap). A few moths may continue to appear in the northern counties until late August, but the flight is expected to end soon in southern and central Wisconsin.

EUROPEAN CORN BORER: Moth counts have increased at a few black light trap locations since the last report. The degree day model for this pest suggests that summer flight has peaked in the southwest, south-central and west-central areas. Susceptible corn should be inspected for egg masses and larvae before 2,100 degree days (modified base 50°F) have been surpassed and the treatment window for second generation corn borers closes.

SPOTTED WING DROSOPHILA: Flies and larvae have now been confirmed in Barron, Burnett, Dane, Door, Iowa, Monroe, Pepin, Pierce, Portage, St. Croix, Rock, Vernon, Washburn and Waushara counties, for a total of 14 counties since the first larvae were detected on June 22. The infestations are primarily affecting raspberries, although flies have also been collected in traps set near aronia and grapes. Spotted wing drosophila poses the greatest threat to ripening fruits, but fruits that drop, split, or become overripe can harbor larvae and should be disposed of to minimize the risk of damage to later-ripening varieties. Insecticide sprays will not protect crops once maggots have infested the fruits.

CORN ROOTWORM: Beetles are appearing in low to moderate numbers on corn silks. Crop advisors and corn growers should be aware that beetle emergence from Bt

corn is delayed by an average of 12 days relative to non-Bt corn, suggesting that the scarcity of beetles as of early August does not necessarily indicate low populations for 2015. Beetle counts could increase sharply as emergence peaks this month.

Western corn rootworm beetles Krista Hamilton DATCP

CORN EARWORM: The primary migration has not started as of August 5. The weekly total count of 23 moths at 12 pheromone trap locations is an increase over last week's total of seven moths, but is still very low. Monitoring network participants should continue to scout silking fields and replace lures on a weekly basis.

FORAGES & GRAINS

POTATO LEAFHOPPER: Counts remain below-threshold at less than 1.6 adults and nymphs per sweep in all surveyed fields. The leaf yellowing occurring at sites on sandy soils may be due to boron deficiency, a disorder common on alfalfa during dry periods that is often misdiagnosed as leafhopper damage. Boron deficiency causes discoloration of the entire leaflet, whereas leafhopper feeding usually results in yellowing of only part of the leaflet, in a typical V-shaped pattern. Low leafhopper counts in fields with extensive leaf yellowing suggest insufficient boron levels are more likely the cause of the symptoms.

STRIPED BLISTER BEETLE: A few alfalfa fields sampled in La Crosse, Monroe and Vernon counties late last week had low counts of 1-2 beetles per 100 sweeps. These insects can be an indicator of potentially high grasshopper populations since the immature stages are predaceous upon grasshopper eggs. Heavy blister beetle infestations often occur during or just after an outbreak of grasshoppers.

DEGREE DAYS JANUARY 1 - AUGUST 5

LOCATION	50°F	2014	NORM	48°F	40°F
Dubuque, IA	1904	1769	1907	1952	2976
Lone Rock	1827	1762	—	1859	2861
Beloit	1908	1802	1936	1929	2971
Sullivan	1530	1436	1829	1638	2492
Madison	ъ801	1672	1846	1840	2812
Juneau	1660	1536	—	1760	2640
Racine	1475	1393	—	1572	2453
Waukesha	1530	1436	—	1638	2492
Milwaukee	1482	1388	1731	1588	2453
Hartford	1530	1436	—	1638	2492
Appleton	1595	1437	—	1695	2572
Green Bay	1494	1337	1643	1621	2468
Big Flats	1711	1550	—	1747	2638
Hancock	1711	1550	1791	1747	2638
Port Edwards	1652	1500	1756	1733	2594
La Crosse	1916	1754	2018	1963	2978
Eau Claire	1728	1582	1816	1835	2739
Cumberland	1534	1376	1695	1636	2466
Bayfield	1224	994	—	1259	1986
Wausau	1467	1319	1659	1564	2364
Medford	1402	1272	1518	1493	2293
Crivitz	1397	1267	—	1465	2291
Crandon	1293	1158	1296	1347	2096

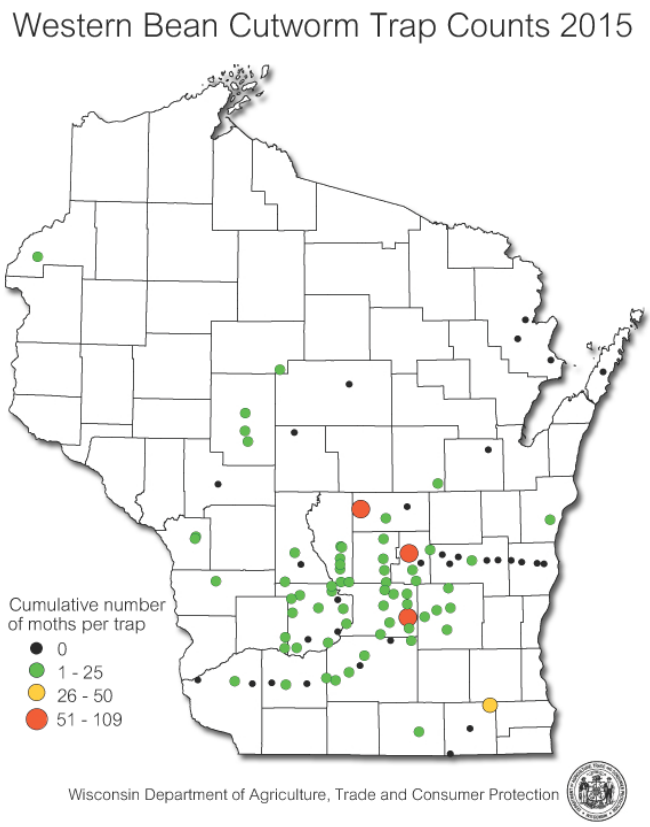
Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2015. NORMALS based on 30-year average daily temps, 1981-2010.

PEA APHID: Populations could begin to increase if the cool, dry weather pattern of early August continues. The average count from July 31-August 5 was less than one per sweep. Pea aphid levels have been consistently low since mid-June when counts peaked at 19 aphids per sweep.

CORN

WESTERN BEAN CUTWORM: Moth collections have begun to decline across southern and central Wisconsin as the flight subsides. Preliminary results of the annual trapping survey indicate that the 2015 flight will be slightly larger than the 2014 flight, which was the smallest on record. Cumulative counts for the 97 pheromone traps distributed across Wisconsin are shown in the map below. The highest individual trap total for the eight-week

monitoring period is 109 moths near Princeton in Green Lake County.



EUROPEAN CORN BORER: Larvae are appearing in the ear tips of corn. Surveyed fields in the west-central counties had 2-12% of the ears infested with one or two small caterpillars, which varied from newly hatched to second-instar. The optimal treatment window for second-generation corn borers will remain open for another two weeks across the southern half of the state. Controls directed against the summer larvae must be applied during the period after egg hatch and before larvae bore into the stalks, prior to the accumulation of 2,100 degree days (modified base 50°F). Degree day totals as of August 5 were: Beloit 1,908, La Crosse 1,916, Madison 1,801 and Hancock 1,711.

JAPANESE BEETLE: A DATCP survey specialist reports that approximately 5% of the plants in a Monroe County field had silks pruned to the ear tip and as many as four beetles per plant were feeding on the silks, potentially impairing pollination. Silk pruning was also noted in scattered fields in La Crosse, Trempealeau and Vernon counties. Control of this pest in field corn is warranted for populations that exceed three beetles per ear when pollination is incomplete.

CORN EARWORM: Counts remained low during the week of July 30-August 5. Only 23 moths were registered at 12 pheromone trap sites compared to seven moths captured the previous week. Despite these low numbers, the appearance of even a few moths in traps signals that sweet corn producers should continue to monitor fields with green silks.

Corn earworm larva Krista Hamilton DATCP

SOYBEANS

SOYBEAN APHID: Surveys conducted from July 24-August 5 failed to detect economic populations in 97 sampled fields. Densities ranged from 0-205 aphids per plant and averaged 14 per plant. Only six fields, one each in Clark, Dunn, Waushara and Wood counties, and two in Eau Claire County, had average counts above 50 aphids per plant.

Although aphid pressure is intensifying, soybean producers are reminded that insecticide treatment is neither economical nor advisable until the threshold of 250 aphids per plant on 80% of the plants has been exceeded. Once again, field-wide average counts have not surpassed this level in any soybean field surveyed by DATCP this season. All soybeans should be examined next week to evaluate aphid densities. Final treatments must be applied before the R5.5 growth stage to provide any economic benefit.

JAPANESE BEETLE: This beetle is still common in soybeans over much of the state, from Kenosha to Eau Claire County. Defoliation levels varied from 1-15% in the past week, which is below the 20% threshold for soybeans in the seed-filling stages.

FRUITS

APPLE MAGGOT: Emergence increased this week at a few orchard locations. Counts of nine and 16 flies per red sphere trap were reported from Rochester and Plymouth, respectively, while 20 of 29 orchards registered one or more flies. Apple growers should maintain traps through the first week of September and continue apple maggot sprays as long as the flies are being captured and counts exceed economic thresholds.

Apple maggot fly *Phil Huntley-Franck bugguide.net*

CODLING MOTH: Apple orchards across the state are currently 1,200-1,400 degree days from the spring biofix and peak emergence of summer codling moths has occurred or should soon occur. Large numbers of second-flight moths have been registered since July 31 at several sites. Continued monitoring of pheromone traps is recommended until the end of August to determine the need for late-season CM control. Spot treatment may be appropriate for blocks where trap counts remain above the economic threshold of five moths per trap per week. Growers are reminded to review pre-harvest intervals before making an application.

OBLIQUEBANDED LEAFROLLER: Moths of the second flight are still appearing in moderate to high numbers across much of the state. The summer flight will likely continue until early September this year, in which case surface feeding damage would also persist into fall.

VEGETABLES

CABBAGE LOOPER: Migrants are appearing in low numbers in black light traps. Although the full extent of the current flight is unknown, weekly scouting is advised this month and through early September. A 10% infestation threshold should be used from early heading until harvest to protect the market quality of cabbage. The same threshold applies to broccoli and cauliflower once flowers or curds begin to develop.

Cabbage looper larva *Jay scientificgardener.blogspot.com*

BASIL DOWNY MILDEW: The UW-Madison Plant Pathology Department confirmed the first case of basil downy mildew (BDM) of the season last week. First reported in Wisconsin in 2010, BDM can rapidly devastate basil crops and render plants unmarketable. Diagnostic characteristics include yellowing and downward curling of foliage and grayish-purple, fuzzy sporulation on leaf undersides. This disease thrives under warm, humid conditions, with symptoms progressing from the lower leaves upward.

Basil downy mildew *Betty Cahill gardenpunchlist.blogspot.com*

Any fungicide product used as a preventative measure must be applied before symptoms appear and reapplied

at regular intervals. Daily scouting of basil crops for BDM is advised. Disking under or destroying basil crops as soon as possible after last harvest will also help to eliminate the source of inoculum.

SQUASH BUG: Adult and nymphs are still very active in pumpkin and winter squash plantings across the state. Vegetable growers should continue to inspect the undersides of leaves for the metallic bronze eggs deposited in groups of 15-40 between leaf veins or on stems as long as small nymphs are present. Squash bugs are capable of damaging mature fruit, thus control may be needed as the crop nears harvest. OMRI-listed materials include PyGanic, insecticidal soaps and certain oils.

NURSERY & FOREST

LEAFHOPPER: Honey locust and maple trees at nurseries in Dane, Dodge and Jefferson counties are showing leaf cupping and tip burn, typical injury resulting from leafhopper feeding. Treatment of the affected trees is generally not needed, but may be justified for young trees when large numbers of leafhoppers are present and symptoms are obvious.

Potato leafhoppers on red maple leaf *Liz Meils DATCP*

ZIMMERMAN PINE MOTH: Nursery inspectors observed the characteristic pitch masses associated with larval feeding on the branches of Scotch pine and spruce trees in Dane, Dodge and Jefferson counties. These pitch masses should be pruned out before the adults emerge and begin depositing eggs on the bark of the main trunk this month. Since this pest may reinfest the same tree year after year, removal of such "brood trees" is recommended. Older, overgrown pines can also serve as infestation sources and should be removed if practical. Another control option is to apply an insecticide early in spring as the larvae first emerge and begin feeding on the bark, usually from early April through May.

Zimmerman pine moth pupa in spruce *Ellen Natzke DATCP*

DUSKY BIRCH SAWFLY: Second-generation larvae were found on the foliage of birch 'Royal Frost' in Vernon County last week. The gregarious caterpillar-like larvae feed around the edges of leaves and curl into a distinctive "S" shape when disturbed. Heavy defoliation by this insect is rare, and chemical control is seldom required.

Dusky birch sawfly larvae *gardenofeden67 flickr.com*

APPLE INSECT & BLACK LIGHT TRAP COUNTS JULY 30 - AUGUST 5

COUNTY	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	APB[5]	LPTB[6]	DWB[7]	AM RED[8]	YELLOW[9]
Bayfield	Keystone	7	3	1	5	—	—	—	6	12
Bayfield	Orienta	57	0	0	4	0	7	133	0	0
Brown	Oneida	1150	48	18	11	0	4	66	0	0
Clark	Greenwood	0	0	0	0	20	0	0	0	0
Columbia	Rio	—	25	5	0	0	0	0	2	0
Crawford	Gays Mills	469	0	1	5	0	0	7	3	0
Dane	Deerfield	270	0	8	15	—	—	—	4	1
Dane	DeForest	37	49	3	5	6	0	4	0	0
Dane	Edgerton	—	—	—	—	—	—	—	—	—
Dane	McFarland	132	45	0	—	—	—	—	—	—
Dane	Mt. Horeb	156	22	1	17	8	7	1	1	—
Dane	Stoughton	207	29	9	7	0	10	13	1	2
Fond du Lac	Campbellsport	—	—	—	—	—	—	—	—	—
Fond du Lac	Malone	—	—	—	—	—	—	—	**1	2
Fond du Lac	Rosendale	99	30	2	6	2	7	—	2	1
Grant	Sinsinawa	—	—	—	—	—	—	—	—	—
Green	Brodhead	35	45	3	14	25	6	30	0	0
Iowa	Mineral Point	830	55	17	31	5	29	12	—	—
Jackson	Hixton	—	—	—	—	—	—	—	—	—
Kenosha	Burlington	950	39	3	2	12	7	74	**1	—
Marathon	Edgar	1328	60	1	1	0	0	91	1	0
Marinette	Niagara	75	8	0	0	0	1	6	1	0
Marquette	Montello	698	13	0	7	—	—	—	0	0
Ozaukee	Mequon	100	23	4	6	0	1	2	*1	—
Pierce	Beldenville	373	5	2	8	0	0	2	2	0
Pierce	Spring Valley	230	10	0	8	0	0	39	*1	0
Racine	Raymond	378	21	8	15	2	18	15	0	0
Racine	Rochester	175	28	17	5	0	0	—	*9	1
Richland	Hill Point	121	7	9	9	—	8	44	**0	0
Sheboygan	Plymouth	315	30	2	4	0	1	21	*16	0
Walworth	East Troy	33	4	0	2	2	1	0	0	1
Walworth	Elkhorn	75	53	0	45	10	14	15	0	3
Waukesha	New Berlin	203	1	4	17	6	4	15	0	1

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

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	1	0	1	1	0	0	2
Columbia	Pardeeville	1	4	0	33	3	19	0	6	0	8
Crawford	Prairie du Chien	—	—	—	—	—	—	—	—	—	—
Fond du Lac	Ripon	—	—	—	—	—	—	—	—	—	—
Manitowoc	Manitowoc	1	0	0	0	0	2	9	9	0	3
Marathon	Wausau	0	0	0	12	8	2	1	2	0	11
Monroe	Sparta	0	0	0	1	3	5	2	0	0	8
Rock	Janesville	2	10	0	0	8	1	0	13	0	0
Walworth	East Troy	0	0	0	0	0	6	0	0	0	23
Wood	Marshfield	0	2	0	4	0	5	1	5	0	6

[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.