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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

Stifling heat and humidity afflicted much of Wisconsin in the past week. Heat advisories were issued for the central and southern counties as afternoon heat index values soared above 100°F. Another series of severe storms brought torrential downpours to parts of western Wisconsin, leaving many roadways flooded and impassable. Rising waters on the Rush River forced the evacuation of some residents in the towns of Baldwin, El Paso and Martell in Pierce and St. Croix counties. Farmers' plans to harvest alfalfa and small grains were dashed by the unstable and intermittently rainy weather. Field conditions are currently very wet and muddy, and damage to lowland and agricultural fields adjacent to the flooded rivers is common. Annoyance by mosquitoes has intensified with the latest rain events.

LOOKING AHEAD

WESTERN BEAN CUTWORM: Numbers in pheromone traps have decreased to very low levels, signifying the end of the adult flight period. Results of the annual trapping survey are provided on the PESTWATCH website at http://www.pestwatch.psu.edu and can be requested by emailing krista.hamilton@wi.gov. The cumulative count on August 13 was 10,218 moths at 140 locations. Network participants may remove their traps at this time.

TRUE ARMYWORM: Damage by the second generation of larvae has been detected in the east-central area. A consultant's report states that 20-30% of the plants were infested in two fields, the first near Mayville in Dodge County, and the second near Campbellsport in Fond du Lac County. The infestations were noticed by farmers on Friday, August 3 and treatments were made the following Monday. This development emphasizes the need for close inspection of corn and lodged grains, particularly in eastern Wisconsin.

CORN EARWORM: Migrants were very active in Dane, Vernon and Wood counties from August 2-12, as indicated by trap counts of 60-160 moths. At other sites, significant flights were not registered and numbers since early July have been comparatively low. The major migration began about two weeks ago. Commercial and fresh market sweet corn growers must remain attentive for egg laying activity by this insect as long as green silks are present.

STRAWBERRY ROOT WEEVIL: Large numbers of these black beetles are entering homes in scattered locations throughout western Wisconsin. They are considered a nuisance by homeowners, although the weevils are not damaging to the structure and do not breed indoors.

GREEN CLOVERWORM: This species is widely distributed throughout the state, but the heaviest larval

infestations have been observed in the south-central and southwest counties. Defoliation levels in Buffalo, Eau Claire, Jackson, La Crosse, Monroe and Trempealeau counties varied from 10-40% this week. Treatment could be justified for fields in which feeding by cloverworms, grasshoppers and Japanese beetles has exceeded the 35% threshold for soybeans in the seed-fill stages.

Green cloverworm moth zxgirl flickr.com

FORAGES

ALFALFA CATERPILLAR: Larvae remain fairly numerous in alfalfa. Most fields contain 1-2 larvae per sweep, and the yellow adult butterflies are still common. The caterpillars vary widely in development from the early to late instars (¼-1½ inches long).

Alfalfa caterpillar butterfly Krista Hamilton DATCP

POTATO LEAFHOPPER: Numbers are variable between different fields, but there has been a general decrease in the last week. Surveys conducted in the west-central counties yielded 0.8-4.5 per sweep, with an average of 1.6 per sweep. Economic counts of 2.0 or more per sweep were noted in the Hixton area of Jackson County and near Ettrick in Trempealeau County, where distinct v-shaped yellowing was evident in a few fields. It would appear that the heavy rain has had a favorable effect in the reduction of populations in some areas.

PLANT BUGS: Populations range from 0.7-3.4 per sweep in surveyed fields in the southwest and west-central districts, and average about 1.5 per sweep. The higher counts were found in Jackson, Monroe and Vernon counties.

DEGREE DAYS JANUARY 1 - AUG 15

LOCATION	50°F	2009	NORM	48°F	40°F
Dubuque, IA	2415	1838	—	2396	3789
Lone Rock	2365	1775	—	2344	3709
Beloit	2526	1828	—	2445	3907
Madison	2346	1766	2022	2358	3679
Sullivan	2397	1804	2061	2304	3733
Juneau	2302	1769	—	2327	3618
Waukesha	2197	1824	—	2259	3491
Hartford	2157	1772	—	2249	3454
Racine	2162	1763	—	2233	3457
Milwaukee	2103	1734	1873	2205	3386
Appleton	2153	1633	1882	2232	3453
Green Bay	2007	1511	1814	2134	3285
Big Flats	2152	1612	—	2152	3431
Hancock	2183	1638	1988	2169	3467
Port Edwards	2105	1565	1911	2145	3385
La Crosse	2362	1811	2194	2297	3710
Eau Claire	2167	1706	1982	2185	3476
Cumberland	1962	1508	—	2009	3214
Bayfield	1590	1176	1481	1658	2761
Wausau	1941	1401	1825	2018	3191
Medford	1933	1414	1653	2018	3189
Crivitz	1915	1401	—	2014	3163
Crandon	1758	1260	1479	1819	2956

Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2010. NORMALS based on 30-year average daily temps, 1971-2001.

CORN

EUROPEAN CORN BORER: Damage to corn has been infrequent, usually with only 1-15% of plants showing midrib feeding, frass or other evidence of infestation.

Treatment is no longer advised now that the degree day accumulation has surpassed 2,100 (base 50°F) in most areas, and second generation larvae are boring into corn stalks. Larvae produced by the summer flight of moths are primarily in the early-intermediate instars.

CORN EARWORM: Locally heavy flights were registered in Dane, Vernon and Wood counties this week. Larvae have been observed in silking corn fields as far north as Marinette County, and treatments are underway. The action threshold for this late-season pest is based on the number of moths per trap per night, and a count of 5-10 moths in 3 consecutive nights indicates the need for protective treatment of susceptible fields. Counts this week were as follows: Cashton 12, Chippewa Falls 29, Coon Valley 72, Janesville 0, Madison 36, Marshall 60, Marshfield 132, Stoughton 30, and Sun Prairie 160.

Corn earworm larva Krista Hamilton DATCP

CORN ROOTWORM: Populations in the west-central counties are mostly low, but one field near Melrose in Jackson County contained 4.2 beetles per plant and 20% of plants showed severe silk pruning. In eastern Monroe County, counts varied from 0.1-2.3 beetles per plant, with about 10% of fields having economic averages above 0.75 per plant.

SOYBEANS

SOYBEAN APHID: Surveys indicate populations remain well below the treatment threshold in most Wisconsin soybean fields. Densities have increased, but not to the point where controls are needed. The average count this week was 16.1 aphids per plant, based upon examination of 82 fields in the R5-R6 growth stages. Only 12% of surveyed fields contained 50-100 per plant, and none had economic counts of 250 or more aphids per plant. Significantly, much of the apparent increase can be attributed to a higher percentage of the smaller "white morph", which develops and reproduces more slowly than the typical green soybean aphid. A few localized fields may qualify for treatment, but these must be evaluated in the immediate future.

JAPANESE BEETLE: This insect is still very common in soybeans in the southern and western parts of the state, where it is contributing to general defoliation levels. Skeletonization has intensified and is severe in a few fields. In Eau Claire, Jackson and Trempealeau counties, beetles numbered from 1-3 per plant on 10-20% of the plants.

CELERY LEAFTIER: Activity has not subsided. Moths are still very abundant in black light traps, gardens, soybean fields and yards. The economic impact of the celery leaftier upsurge this season, if any, remains unknown.

GREEN CLOVERWORM: Many of the larvae have pupated and oviposition by the adult moths is extensive. The appearance of small larvae indicates the start of a third generation. A large acreage of soybeans has been sprayed in the southern half of the state in the past four weeks to control these worms.

Green cloverworm larva Krista Hamilton DATCP

FRUITS

CODLING MOTH: The second flight of moths continued at very high levels in the southeastern and northeastern counties, which are sometimes 7-10 days behind advan-

ced counties in terms of degree day accumulations. At Niagara in Marinette County, the weekly counts increased from 65 moths per trap last week to 74 per trap this week. Relatively high counts of 23-28 moths were also registered at the New Berlin and Raymond monitoring locations.

As stated last week, orchards that register higher counts of second flight moths relative to the first flight likely have some degree of fruit injury and should be closely inspected for damage by first generation larvae. Apple growers are reminded to rotate insecticides between generations to prevent resistance development.

APPLE MAGGOT: Damage is appearing on fruits in the southern counties and severe injury is reported in a few ineffectively treated orchards. Peak emergence of flies occurred 1-2 weeks ago depending upon area of the state, and activity has generally declined. The high count for the week was 66 flies on a baited red sphere trap at Mequon in Ozaukee County. Frequent rain events this season make it probable that flies will persist in orchards for several more weeks.

Rhagoletis sp. *magikcanoe.com*

SPOTTED TENTIFORM LEAFMINER: Substantial numbers of moths were registered for the second week at orchards in southeast and northeast Wisconsin, as the third flight continued. High counts for the week ranged from 1,140 and 1,896 moths per trap at in Racine and Marinette counties. In other areas of the state, the third flight has diminished to moderate levels.

SLUGS: This mollusk continues to plague the home gardener, especially now that fruits have begun to ripen. Damage has been reported from many scattered areas such as Fond du Lac and Trempealeau counties, and a number of weedy corn and spring-seeded alfalfa fields have abnormally high populations.

Slugs feeding on tomatoes *www.extension.umn.edu*

VEGETABLES

STRIPED CUCUMBER BEETLE: Several plantings of cucumbers, melons and pumpkins in Dane and Sauk counties are moderately-heavily infested with this insect. The direct damage has not been significant, but the risk of bacterial wilt transmission is high based on the number of beetles observed.

CUCURBIT DOWNY MILDEW: Cucumber fields in Columbia, Dane, Portage and Waushara counties are showing development of symptoms. The IPMPipe website at http://cdm.ipmpipe.org is forecasting a moderate-HIGH threat of new infection from airborne transport of spores at this time. Appropriate protective fungicide sprays should be maintained.

BASIL DOWNY MILDEW: This new disease in North America and Europe has been verified on basil in Dane County, representing the first confirmed case in Wisconsin. Diagnosis was made by Dr. Brian Hudelson of the UW Plant Disease Diagnostic Clinic last week. Leaves of basil affected by downy mildew turn yellow and eventually necrotic, with corresponding purple-gray spores on the lower surfaces. Basil crops should be disked under or destroyed immediately after last harvest to eliminate inoculum sources.

NURSERY & LANDSCAPE

VERTICILLIUM WILT: Eastern redbud trees at nurseries in Walworth County were diagnosed with this fatal vascular disease, frequently misdiagnosed as decline caused by environmental factors. Symptoms may be acute or chronic, and are highly variable. Acute symptoms include premature fall coloration, wilting, defoliation, branch dieback and death, whereas chronic symptoms typically reflect damage from earlier infections and may include slow growth, sparse foliage, stunted leaves and twigs, leaf scorch and abnormally heavy seed crops.

Trees showing severe, widespread wilt and dieback cannot be saved, although regular watering during dry periods may reduce symptom severity. Verticillium-infected plants should be replaced with a resistant variety such as aspen, beech, sycamore, poplar, willow or any conifer.

EASTERN SPRUCE GALL ADELGID: Mature yellow nymphs are emerging from galls on Black Hills and Norway spruce trees in Ozaukee, Racine and Walworth counties and molting into winged females. Insecticides can be applied in September and October to control this life stage and overwintering fundatrices (immature females) on new buds. Dormant oil treatments made in October and November, or in April, are particularly effective against this pest.

Mature adelgid nymphs emerging from gall *Liz Meils DATCP*

WILLOW SAWFLY: Nursery inspections in the past week found heavy infestations of this second generation larvae on Niobe weeping willows in St. Croix County. The black or greenish black larvae with large yellow spots are gregarious feeders that quickly defoliate large portions of infested willows and poplars. Defoliation can be expected for several more weeks. This is not an insect that ordinarily requires control measures.

FOREST

ASPEN BLOTCHMINER: Damage to aspens is reported over an extensive area north of Highway 8 from Polk County east to Forest County. Numerous acres are moderately-heavily infested. Larvae of this insect feed between the leaf surfaces, forming large, circular blotches and brown discoloration. Severely infested trees appear green in the upper crown and brown below. Significant, long-term damage is not expected.

Aspen blotchminer leaf mines *Steve Katovich USDA Forest Service*

GYPSY MOTH: Examination of 60% of the 29,655 pheromone traps in Wisconsin yielded a total male moth count of 37,991. This figure is considerably higher than the 1,388 moths reported at the same time last year when the flight was delayed by low temperatures. The adult flight period has ended in the southern counties, although activity is still being registered in the north. Removal of traps distributed south of Highway 21 began this week.

APPLE INSECT & BLACK LIGHT TRAP COUNTS AUGUST 6 - 12

COUNTY	DATE	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	OBLR[5]	AM RED[6]	AM YELLOW[7]
Bayfield	8/06-8/11	Keystone	3	1	0	0	—	0	0
Bayfield	8/06-8/12	Bayfield	—	—	—	—	—	—	—
Bayfield	8/02-8/09	Orienta	34	0	0	0	—	0	0
Brown	8/06-8/12	Oneida	—	—	—	—	—	—	—
Chippewa	8/06-8/12	Chippewa Falls 1	0	15	9	0	0	*5	0
Chippewa	8/06-8/12	Chippewa Falls 2	—	—	—	—	—	—	—
Dane	8/06-8/12	Deerfield	45	21	6	5	—	*1	0
Dane	8/06-8/12	McFarland	—	0	0	0	—	*2	—
Dane	8/05-8/11	Stoughton	133	33	4.5	0	—	*1	*1
Dane	8/06-8/12	West Madison	144	35	0	0	—	0	0
Dodge	8/06-8/12	Brownsville	—	—	—	—	—	—	—
Fond du Lac	8/06-8/12	Campbellsport	100	25	0	17	—	*1	*1
Fond du Lac	8/06-8/12	Malone	350	30	3	7	—	0	0
Fond du Lac	8/06-8/12	Rosendale	264	62	3	0	—	*1	*2
Grant	8/06-8/12	Sinsinawa	—	—	—	—	—	—	—
Green	8/06-8/12	Brodhead	0	28	7	11	—	0	0
Iowa	8/06-8/12	Dodgeville	—	—	—	—	—	—	—
Iowa	8/06-8/12	Mineral Point	270	174	3	1	0	**1	0
Jackson	8/06-8/12	Hixton	12	2	6	10	0	0	*1
Kenosha	8/06-8/12	Burlington	175	12	5	0	—	*2	0
Marinette	8/06-8/12	Niagara	1896	0	74	4	—	*2	0
Marquette	8/06-8/12	Montello	6	12	5	0		*1	0
Ozaukee	8/01-8/09	Mequon	25	11	3	3		**66	*7
Pierce	8/05-8/12	Beldenville	—	—	—	—	—	—	—
Pierce	8/06-8/12	Spring Valley	106	42	4.5	3	0	**2.25	*1
Racine	8/06-8/12	Raymond	1140	74	23	9	—	0	0
Racine	8/05-8/12	Rochester	220	55	6	6	—	*5	0
Richland	8/03-8/10	Hillpoint	910	52	3	13	3	0	0
Sheboygan	8/06-8/12	Plymouth	—	—	—	—	—	—	—
Walworth	8/06-8/12	East Troy	30	3	1	5	—	0	0
Walworth	8/06-8/12	Elkhorn	40	10	0	4	—	0	0
Waukesha	8/06-8/12	New Berlin	875	17	28	4	—	0	0

[1]Spotted tentiform leafminer; [2]Redbanded leafroller; [3]Codling moth; [4]Obliquebanded leafroller EASTERN; [5]Oblique-banded leafroller WESTERN; [6]Apple maggot red ball; *Unbaited AM trap; **Baited AM trap; [7]Apple maggot yellow board.

COUNTY	DATE	SITE	ECB[1]	TA[2]	BCW[3]	SCW[4]	DCW[5]	CE[6]	CEL[7]	WBC[8]	FORL[9]	VCW[10]
Chippewa	8/06-8/12	Chipp Falls	*18	0	0	0	16	0	1	7	0	0
Columbia	8/06-8/12	Arlington	0	3	1	2	15	0	4	0	3	0
Grant	8/06-8/12	Lancaster	0	0	0	0	0	0	1	2	0	0
Manitowoc	8/06-8/12	Manitowoc	—	—	—	—	—	—	—	—	—	—
Marathon	8/06-8/12	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	8/06-8/12	Sparta	0	0	0	48	19	0	3	0	18	0
Rock	8/06-8/12	Janesville	1	8	1	0	2	0	44	0	17	0
Walworth	8/06-8/12	East Troy	—	—	—	—	—	—	—	—	—	—
Wood	8/05-8/12	Marshfield	8	11	12	20	51	42	12	0	5	1
Vernon	8/06-8/12	Coon Valley	2	25	7	14	22	11	4	5	0	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; *May be celery leaftier moths.