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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

Dry conditions with cool evening temperatures prevailed during the final week of August. Most crops continue to develop behind schedule and require a minimum of 3 weeks of favorable weather to properly mature. The lack of precipitation and possibility of an early frost have become major considerations for Wisconsin farmers, particularly after temperatures in the lows 30s were recorded in the northern areas of the state on the night of August 24. Rains fell across the southern, central and northwest regions during the week, but the weather continues to be very dry. In the northeast, no measurable rainfall has occurred in 5 weeks. Crops statewide are greatly in need of moisture, and some corn planted on sand is fired beyond the point where rain would be of much benefit. If cool temperatures persist, development and activity of late-season pest insects is likely to be slowed and prolonged.

LOOKING AHEAD

CORN ROOTWORM: The annual survey of adult corn rootworms is nearly complete, except in a few west central, northwest and north central counties. Beetles are still prevalent throughout the state and high numbers can be found in those fields with green or slightly brown corn silks. Many fields are exhibiting uneven growth this season due to cold temperatures and frequent rain in May and June, and in such fields the distribution of rootworm adults is likewise erratic, with most concentrated in the areas where the silks have not browned thoroughly. In a majority of fields, the silks have turned brown and the beetles have left in search of younger corn or other food sources. A summary of the final results will be distributed by email and provided on the Wisconsin Pest Bulletin website in September.

CORN EARWORM: Comparatively high numbers of moths were registered in pheromone traps near Chippewa Falls, Cashton, Coon Valley and Marshfield in the past week, signaling that intensive survey and control measures are still in order in susceptible fields. Sweet corn growers are advised to continue to monitor trap counts in the next week.

EUROPEAN CORN BORER: The treatment period for second generation corn borers remains open in the central counties. Inspections for egg masses and small larvae should be performed in the week ahead, before 2,100 degree days are surpassed. Most of the larvae found in grain corn fields in the central and west central counties were in the 1st-3rd instars as of August 27.

FALL PESTS: Numbers of boxelder bugs, multicolored Asian ladybeetles and western conifer seedbugs entering

homes are expected to increase in September as these fall nuisance pests move indoors for the winter. Problems associated with boxelder bugs in particular may be accentuated by the dry weather, which inhibits the spread of a fungal disease that regulates populations. Openings or cracks around windows and doors should be sealed now to prevent their entry, and insecticides may be applied to the siding or foundations of homes in September or early October. Under no circumstance should chemical insecticides be used indoors.

Multicolored Asian ladybeetle www.news.uns.purdue.edu

FORAGES

POTATO LEAFHOPPER: Populations over most of the state remain fairly low at 1-2 per sweep, except in a few very dry, sandy fields in the central counties where 4.4 leafhoppers per sweep were noted. Many fields in the west central counties of Buffalo, Jackson, La Crosse, Monroe and Trempealeau are exhibiting moderate to severe yellowing, but in nearly all cases the symptoms cannot be attributed to excessive leafhopper populations since the counts obtained by sweeping were low. It is probable that the cause of such symptoms is the lack of adequate rainfall, late summer diseases, nutrient deficiency, or a combination of these factors. Equivalent numbers of adults and nymphs were found in several fields, suggesting that reproduction is still occurring.

FORAGE PESTS: The situation in alfalfa has changed very little in the past week, or during the latter part of August for that matter. Mixed populations of tarnished and alfalfa plant bugs range from 0.4-3.1 per sweep, and nymphs are still fairly common. Counts of pea aphids currently average below 4 per sweep in the south central, central and west central regions. Grasshoppers remain abundant in the grassy areas adjacent to alfalfa, but minimal feeding injury is evident beyond the field margins. Alfalfa caterpillars are common, but not numerous.

DEGREE DAYS MARCH 1 - AUGUST 28

LOCATION	50°F	2007	NORM	48°F	40°F
Dubuque, IA	2240	2532	—	2360	3584
Lone Rock	2076	2415	—	2198	3357
Beloit	2287	2513	—	2364	3627
Madison	2076	2388	2269	2220	3359
Sullivan	2213	2329	2320	2257	3528
Juneau	2097	2301	—	2213	3377
Waukesha	2094	2266	—	2188	3377
Hartford	2034	2285	—	2181	3306
Racine	2014	2260	—	2147	3289
Milwaukee	1971	2247	2133	2103	3239
Appleton	1998	2222	2123	2134	3242
Green Bay	1873	2099	2046	2012	3111
Big Flats	1896	2225	—	2017	3098
Hancock	1924	2217	2225	2022	3135
Port Edwards	1852	2205	2145	1971	3048
La Crosse	2074	2572	2463	2177	3346
Eau Claire	1934	2356	2226	2038	3160
Cumberland	1728	2134	2128	1820	2893
Bayfield	1382	1750	1681	1464	2452
Wausau	1720	2056	2052	1835	2877
Medford	1653	1989	1862	1763	2795
Crivitz	1729	2017	—	1867	2928
Crandon	1548	1879	1653	1638	2638

Method: ModifiedB50; Sine48; ModifiedB40 as of March 1, 2008. NORMALS based on 30-year average daily temps, 1971-2001.

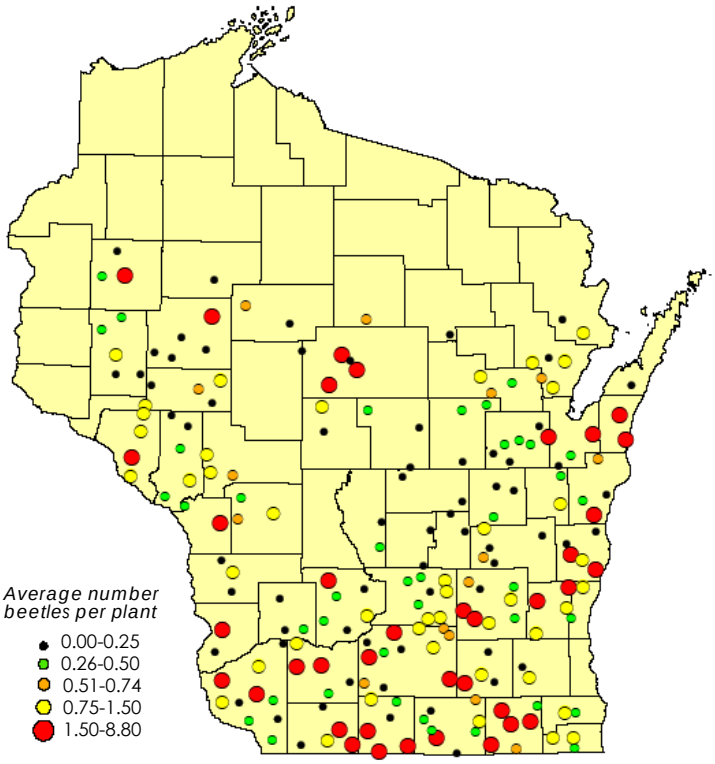
CORN

CORN ROOTWORM: Preliminary survey results show the average population is 1.1 per plant in the southwest district, 1.5 per plant in the south central district, 1.6 per plant in the southeast district, 1.0 per plant in the east central district, and 0.6 in the northeast district (*NOTE: These figures have been updated since the last issue*). In the west central counties of Buffalo, Eau Claire, La Crosse, Monroe, and Trempealeau, 50% of the fields examined earlier in the week contained economic populations of 0.75 or more beetle per plant. By contrast, mostly low populations were found in the central and northwest

counties where just 16% of the fields surveyed contained high counts of beetles. The western species comprised 52% of the population, while the northern species comprised about 48%. Economic numbers were found in 81 of the 202 (40%) fields surveyed as of August 28, indicating an elevated risk for root injury in continuous corn next summer if some form of control is not used.

2008 CORN ROOTWORM BEETLE SURVEY

Preliminary Results



WESTERN BEAN CUTWORM: Surveys of corn in the central and west central counties detected moderate to very heavy infestations of this insect. Larvae were noted in approximately 50% of the ears in a field west of Oxford in Adams County, and in 72% of the ears in a field near Big Flats. In the latter field, many of the corn ears contained 2-4 western bean cutworm larvae, and a total of 116 larvae were found per 100 ears examined. In Buffalo and Trempealeau counties, infestations affecting 20-45% of the ears were encountered. Larvae in southern Adams County were 1½ inches long and nearly mature by August 25, while in the northern part of the county small 2nd and 3rd instar larvae were predominant. This was also the case in the west central counties where larvae in all stages of development were noted, although the intermediate instars (3rd-4th) were more prevalent. Continued scouting in September is recommended.

Western bean cutworm larva, Adams County *Krista Hamilton DATCP*

CORN EARWORM: Four successive weeks of large flights of moths have produced serious infestations in several areas of the state. Larvae in all stages can be found in fields from Kenosha County in the southeast to Barron County in the northwest. Examination of grain corn fields in Adams, Marquette, Buffalo, Jackson, Pepin and Trempealeau counties found 10-40% of the ears were infested with mostly large 3rd-5th instar larvae, although some also contained very small larvae. Infestations are not limited to the areas mentioned, and growers are advised to continue survey and control measures in fields with silks that have not browned entirely.

Corn earworm larva, Pepin County *Krista Hamilton DATCP*

EUROPEAN CORN BORER: The second flight of moths declined to low levels at most trap locations in the past week (< 38 moths). Surveys show that 1st-3rd instar larvae predominate in the central and west central districts, as far north as Osseo in Trempealeau County.

Infestations affecting 5-24% of corn plants were observed between August 25 and 27.

SOYBEANS

SOYBEAN APHID: The expected seasonal decline in aphid populations has not yet occurred, a situation that is very unusual for late August. Colonies have continued to increase in recent weeks, possibly due to a combination of climatic variables conducive to aphid reproduction (i.e. cool temperatures in August) as well as widespread flooding in June in the southern half of the state, which caused a large proportion of soybeans to be planted late or replanted. During the last reporting period, densities increased in 2 of 5 Dodge County fields monitored weekly since June 30. In Columbia County, populations in untreated fields also checked weekly remained unchanged at about 200-280 aphids per plant. A Wisconsin Crop Manager report from Eileen Cullen, UW-Extension Entomologist, states that the seasonal decline is activated by such environmental indicators as lower temperatures and shorter day length. Temperatures below 45°F in late August or September initiate the production of a winged generation of aphids that migrates to buckthorn, the winter host. A majority of Wisconsin soybean fields are now beyond the growth stage at which yield loss is expected, but the few remaining R4-R5 fields should be examined through R5.5. Further explanation and recommendations are available through the Wisconsin Crop Manager at http://ipcm.wisc.edu/WCMNews/tabid/53/EntryID/624/Default.aspx.

FRUITS

CRANBERRY PESTS: Weather continues to slow progress of the cranberry crop, especially in the northern bog regions where several "frost nights" occurred in the past week. Degree day accumulations range from 7% behind average in the north, to 14% behind in the Cranmoor and Warrens production areas. Delays in growth are unlikely to be offset unless very warm temperatures prevail in September.

Insect activity has slowed in response to the reduced temperatures. Flea beetle populations are being addressed, the second flight of Sparganothis fruitworm moths is in progress, and treatments of cranberry girdler hot spots are underway. Cranberry girdler feeding on the stems and roots causes vine dieback and results in the development of irregular brown areas in cranberry beds. Egg masses are deposited by female moths over a 2-day period, and subsequently drop to the floor of the bed for the winter. Sanding cranberry beds during the winter months will help control some of these pests, but producers are advised to monitor this pest using pheromone traps next spring.

Sparganothis fruitworm moth *meena www.picasaweb.google.com*

At this time growers are encouraged to complete tissue sampling for inclusion into their nutrient management plans for the 2009 crop year. For best results, sample only new growth from fruiting and non-fruiting uprights.
-- Tod Planer, WSCGA Whole Farm Conservation Project

APPLE MAGGOT: A marked increase in apple maggot numbers has occurred in several apple orchards in the last 3 weeks, indicating that growers should not cease controls prematurely. Economic captures of 1 or more flies per unbaited trap or 5 or more flies per baited trap were registered at 6 of the 20 reporting locations from August 22-28. The weekly high count of 35 flies on an unbaited red ball trap was registered near Dodgeville in Iowa County.

CODLING MOTH: Economic counts of 5 moths per trap per week were registered at fewer apple orchards in the last reporting period, but numbers remain extremely high near Dodgeville and Bayfield where counts of 133 and 63 moths were reported, respectively. Orchards that continue to record high counts may need to reconsider the efficacy and timing of management programs to account for late season codling moth activity.

STINK BUG: Egg masses have been observed on the undersides of leaves in southern orchards, which signals the potential for fruit injury in the next few weeks. Growers should monitor fruits for evidence of feeding by these insects and tarnished plant bugs.

Green stinkbug nymph *Carol Inderieden*

OBLIQUEBANDED LEAFROLLER: Orchardists are reminded to monitor pheromone traps for this insect and the Oriental fruit moth regularly throughout September, long after spraying is discontinued. Unusually large flights of obliquebanded leafroller moths were documented at several orchards in August, and the summer generation of larvae can cause significant fruit damage late in the growing season.

VEGETABLES

CABBAGE LOOPER: Six moths were registered at Bourbonnais, IL and no moths were reported at Chippewa Falls from August 18-25. For the 2nd consecutive year, very low numbers were reported throughout the growing season at these trap locations. Nevertheless, the minimal counts that were documented revealed the arrival of migrant moths by June 17 and the peak of the flight during the week of July 20-26.

WEEDS

LATE SEASON WEED MANAGEMENT: Fall is an opportune time to implement preventative control measures, reduce current weed population densities, and plan management programs for next season. Growers are advised to take note of the most common weeds on a field by field basis and document those species that were not controlled by earlier management activities in order to develop a more strategic and effective program. Cultural control measures such as cleaning equipment between fields, delaying fall tillage to encourage seed predation, managing fencerows to promote predator habitat, and monitoring field margins for aggressive species that have begun to establish are strongly urged. Fields with persistent weed problems may benefit from rotation to alfalfa or wheat. In many instances, a combination of tactics is required to maintain good control of the most pervasive weeds.

SHATTERCANE: In Jackson County this comparatively tall and aggressive plant has begun to form seed. Shattercane invades and competes with row crops, and therefore populations starting to appear in the margins of fields should be eliminated promptly.

Shattercane and giant ragweed *Clarissa Hammond DATCP*

SPOTTED KNAPWEED: Plants containing seeds at or near maturity were observed from Walworth and Waukesha counties in the southeast, to Barron and Chippewa counties in the northwest. Each spotted knapweed plant is capable of producing more than 1,000 seeds, which explains the prevalence and abundance of this highly invasive plant.

NURSERY & LANDSCAPE

EASTERN SPRUCE GALL ADELGID: In Dane County the mature nymphs of this adelgid have begun to migrate to the needles of spruce and transform into winged females. The winged females do not readily fly, but remain on the tree and deposit up to 60 eggs within 2-5 days. The eggs

result in mobile nymphs which move to new buds before the onset of winter. Horticultural oil sprays should be applied now, for there are no effective treatments once the galls have formed.

Mature nymphs emerging from gall *Liz Meils DATCP*

PLANT GALLS: A light assortment of galls was noted on nursery stock in the past week, including oak bullet gall on swamp white oak in Dane County, bladder gall on autumn blaze maple in Fond du Lac and Sheboygan counties, and ash flower gall in Waukesha County. Galls are abnormal outgrowths of plant tissue induced by insects, fungi, bacteria, nematodes or mites. They may develop on various plant parts, but commonly occur on the branches and leaves. Chemical treatments usually are unwarranted, but should be timed to control the adult stage if needed. Pruning and destroying affected plant parts is the preferred control method.

Leaf vein gall on oak *Liz Meils DATCP*

ISLAND CHLOROSIS: Inspectors report angular yellow lesions caused by this common yet poorly understood disorder on hackberry leaves throughout the state. One theory suggests it is a leafhopper-vectored virus, but laboratory tests implicating a virus have been negative. A second theory contends that it is caused by a phytoplasma, similar to aster yellows. Nurseries that maintain rigorous leafhopper control programs report fewer occurrences of this disorder, suggesting that it may be transmitted by leafhoppers. No corrective action is needed.

TRAPPING NETWORKS

CORN EARWORM: The peak of the primary flight of corn earworm moths occurred at pheromone trap locations in the south central district between August 15 and 22, and at sites in the east central and northern districts during the past week. Marshfield, Cashton, Chippewa Falls and Coon Valley registered seasonal high counts of 193, 125, 89 and 78 moths, respectively. Very low numbers were registered at Janesville and Lancaster for the 2nd week. Cumulative counts for the monitoring period of August 21-28 were as follows: Cashton (125); Tomah (100); Marshfield (193); Chippewa Falls (89); Coon Valley A (78); Manitowoc (34); Coon Valley B (29); Lancaster (0); Janesville (0); Sparta (15); Wausau (3).

BLACK LIGHT TRAPS: Nocturnal moth activity declined this week as nighttime temperatures fell into the 30s in the northern counties and 40s-50s in the southern counties. However, noteworthy captures of 45-195 dingy cutworm moths occurred near East Troy, Chippewa Falls, Wausau, Marshfield and Sparta. Spotted cutworm counts remained low (< 19 moths), while forage looper counts ranged from 1-27 moths, with the weekly high count documented at Lancaster. Captures are likely to be erratic, but mostly low during the first weeks of September.

APPLE INSECT & BLACK LIGHT TRAP COUNTS AUGUST 22-28

COUNTY	DATE	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	AM RED[5]	AM YELLOW[6]
Bayfield	8/22-8/28	Bayfield Apple			16.8 max63			
Bayfield	8/22-8/28	Lobermeier	20	0	0	0	0	0
Bayfield	8/18-8/25	Orienta	73	0	0	0	0	0
Brown	8/22-8/28	Oneida	224	82	6	43	*2	0.2
Fond du Lac	8/22-8/28	Campbellsport 1	300	0	0	30	0	0
Iowa	8/22-8/28	Dodgeville	204	150	133	28	*35	4
Iowa	8/22-8/28	Mineral Point	22	176	2	7	*3	0
Marquette	8/22-8/28	Montello	15	0	0	0	*2	0
Ozaukee	8/22-8/28	Mequon	60	2	1.3	0	**0.8 *0.2	
Pierce	8/22-8/28	Spring Valley	1026	2	4.6	4	**10 *0	0
Racine	8/22-8/28	Raymond	516	40	6	9	0	0
Racine	8/22-8/28	Rochester	750	106	6.93	20	*0.53	0
Waukesha	8/22-8/28	New Berlin	553	17	14	0	0	0
Walworth	8/22-8/28	Elkhorn	100	5	2	3	*2	0
Walworth	8/22-8/28	East Troy	50	4	5	9	0	0

[1]Spotted tentiform leafminer; [2]Redbanded leafroller; [3]Codling moth; [4]Obliquebanded leafroller; [5]Apple maggot red ball; *Unbaited red ball; **Baited red ball; [6]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	8/20-8/27	Chipp. Falls	1	0	0	3	95	0	3	0	1	0
Columbia	8/21-8/28	Arlington	38	3	0	34	39	10	1	3	2	0
Dane	8/21-8/28	Mazomanie	7	3	0	9	24	0	2	0	6	0
Grant	8/21-8/28	Lancaster	2	2	0	0	16	2	3	0	27	0
Manitowoc	8/21-8/28	Manitowoc	2	0	0	2	35	0	1	0	11	0
Marathon	8/21-8/28	Wausau	2	1	0	19	93	3	1	0	0	3
Monroe	8/21-8/28	Sparta	0	0	0	0	68	0	0	0	0	0
Rock	8/20-8/27	Janesville	0	1	0	0	12	0	2	0	1	0
Walworth	8/21-8/28	East Troy	5	0	0	5	195	0	1	0	21	0
Wood	8/21-8/28	Marshfield	4	1	0	4	45	3	0	0	0	2

[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.