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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

High pressure settled over Wisconsin during the last week, resulting in mostly dry weather and pleasant temperatures. Rainfall on August 8-10 eased stress on summer crops, but soil moisture levels remain short or very short for 50% of agricultural lands. Moderate to extreme drought conditions have developed across the 41 northern and central counties, prompting a state of emergency declaration to expedite farmers' requests for temporary irrigation permits. Hot, dry weather promoted oats and winter wheat harvesting, as well as rapid crop development. The Wisconsin Statistical Reporting Service data for the period ending August 10 shows that 77% of the state's corn crop has silked, compared to 80% last year and 86% for the 5-year average. Fifty-five percent of the corn crop was rated in good to excellent condition, a 7-point increase from the previous week.

LOOKING AHEAD

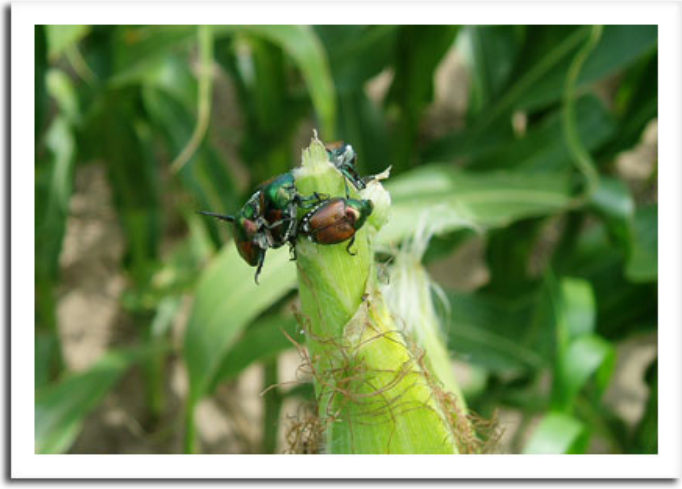
EUROPEAN CORN BORER: The peak in summer moth activity should occur before August 17 in the southern counties and August 22 in the central counties, a few days earlier than last predicted. Pupae and 5th instar larvae are still very common in many corn fields, and these stages are expected to contribute to the flight in coming weeks. The optimum treatment period for second generation larvae has opened in the southern and central counties where 1,550 degree days (base 50°F) were surpassed by August 14.

CORN EARWORM: Adults are appearing in low numbers at most pheromone trap sites, but the counts reported thus far have not been cause for immediate concern. Surveys conducted in Buffalo, La Crosse, Pepin and Trempealeau counties found infestation rates of 5-20%, with larvae ranging in length from ¼-½ inch. Larval populations are increasing in corn, signaling that close inspection of susceptible fields should begin at this time. The major flight of moths can be anticipated before the end of the month.

TWO-SPOTTED SPIDER MITE: County Extension personnel and consultants are reporting significant injury to soybeans in Adams, Chippewa, Jefferson, Manitowoc and Sheboygan counties. Several fields near Ettrick in Trempealeau County are exhibiting stippling of leaves in the upper canopy, extreme yellowing and minor leaf loss, all key indicators of heavy infestation. Chemical treatment is warranted only through R5 (beginning seed) if mites are present and plants throughout the field show stippling.

JAPANESE BEETLE: Damaging numbers of beetles (1-4 per plant) were observed in southeastern Wisconsin corn fields, and substantial silk clipping was evident. At one

location in Kenosha County, 5-10% of the plants with green silks had been pruned to the ear tip, thus preventing pollination. Insecticidal treatment is recommended for their control when pollination is incomplete and populations exceed 3 beetles per ear.



Japanese beetles feeding on corn silks *Clarissa Hammond DATCP*

ALERTS

LATE BLIGHT: Since the detection of late blight on July 29, Wisconsin still has only nine confirmed cases of the disease on tomato, in Dane, Rock, Portage and Lafayette counties. The majority of the infections are in home gardens, with three sites being commercial fresh market or community-supported agriculture (CSA) farms. To date, no late blight has been confirmed on potato in the state this year.

Genetic analysis of isolates by UW-Madison indicates that the strain in Wisconsin is US-14, which is consistent with findings in New York State. The US-14 is similar to the US-8 genotype last isolated in Wisconsin in 2003. The US-14 genotype is reported to be virulent on potatoes, and particularly aggressive in causing tuber rot.

FORAGES

POTATO LEAFHOPPER: Populations in alfalfa are erratic and not uniformly above treatment thresholds. Numbers in Buffalo, La Crosse, Pepin and Trempealeau counties vary from 0.4-6.5 per sweep, with economic levels of 2.0 or more leafhoppers per sweep detected in about 25% of fields checked. In the central and northern areas, including Portage, Shawano, Waupaca and Wood counties, sweep net counts range from 0.1- 2.2 and average 0.7. The general condition of alfalfa is also highly variable at this time. Many stands are thin and severely yellowed due to a combination of leafhopper injury, nutrient deficiency and drought stress. Others are dense, vigorous and contain relatively few leafhoppers. Nymphs still comprise about 50% of the population in the majority of fields.

PLANT BUGS: Numbers rarely exceed 3.0 per sweep. The alfalfa plant bug predominates in the areas north of Portage County, while the tarnished plant bug is more abundant to the south. Nymphs of various maturities were noted in all surveyed fields.

FLEA BEETLE: An unidentified flea beetle, presumably the corn flea beetle, was collected from alfalfa in Buffalo, Pepin, Pierce and Trempealeau counties at the rate of 0.2-2.4 per sweep. This species appears to be prevalent only in west-central district. None were found in alfalfa surveyed in southern, central and north-central counties.

DEGREE DAYS JANUARY 1 - AUG 13

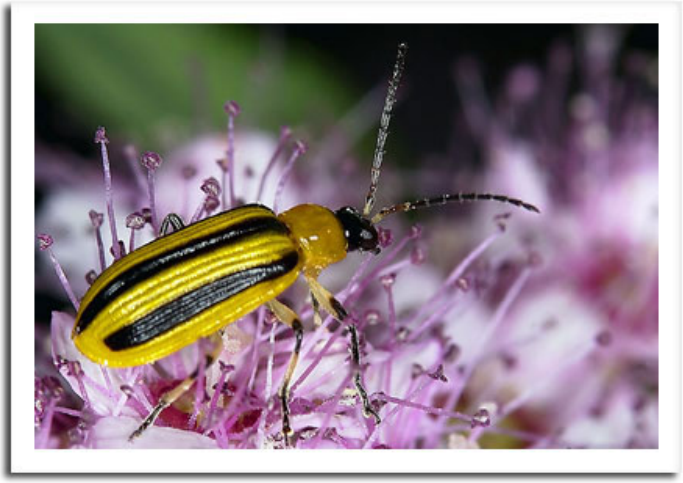
LOCATION	50°F	2008	NORM	48°F	40°F
Dubuque, IA	1765	1955	—	1877	3016
Lone Rock	1700	1798	—	1783	2909
Beloit	1754	1979	—	1844	3006
Madison	1688	1788	1984	1798	2898
Sullivan	1727	1901	2022	1812	2957
Juneau	1688	1805	—	1797	2891
Waukesha	1746	1788	—	1832	2960
Hartford	1692	1743	—	1812	2886
Racine	1684	1708	—	1782	2868
Milwaukee	1653	1678	1833	1749	2831
Appleton	1557	1709	1845	1670	2693
Green Bay	1440	1600	1778	1545	2546
Big Flats	1538	1641	—	1630	2671
Hancock	1565	1663	1951	1624	2688
Port Edwards	1492	1599	1875	1590	2611
La Crosse	1730	1798	2151	1780	2939
Eau Claire	1630	1650	1944	1722	2802
Cumberland	1438	1449	1855	1485	2511
Bayfield	1108	1157	1450	1159	2040
Wausau	1331	1470	1789	1411	2392
Medford	1344	1402	1619	1424	2416
Crivitz	1330	1480	—	1397	2387
Crandon	1193	1320	1450	1226	2163

Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2009. NORMALS based on 30-year average daily temps, 1971-2001.

PEA APHID: These insects are scarce in field collections, except in a few central and west-central alfalfa fields where they occasionally average 5-7 per sweep. The average is about 2.0 per sweep.

CORN

CORN ROOTWORM: The annual beetle survey has begun and preliminary results show a decrease from 2008 populations in the southeast and east-central agricultural reporting districts. Surveyed fields in Ozaukee, Washington, Walworth and Waukesha counties contained an average of 0.4 per plant, a substantial decline from last year's average of 1.8 per plant. The average population in Brown, Calumet, Door, Fond du Lac, Kewaunee, Manitowoc, Sheboygan and Winnebago counties was 0.2 beetle per plant, also considerably lower than the 2008 average of 1.0 per plant. Surveys are incomplete in the southwest and west-central districts, but averages by county are as follows: Buffalo 1.3, Iowa 1.0, Lafayette 0.3, and Trempealeau 0.1. An average of 0.75 or more beetle per plant indicates an elevated risk for root injury to continuous corn next season if some form of control is not used. Eleven of the 60 fields examined (18%) from August 4-13 had such a count or higher.



Western corn rootworm beetle Jerry Ting gallery.photo.net

WESTERN BEAN CUTWORM: Larvae from the late July flight of moths are primarily in the early to intermediate instars and should be detectable in corn ears. Examination of corn in Buffalo, La Crosse, Monroe and Pierce counties found egg masses and larvae in approximately 4% of fields. No economic infestations were observed during the past week.

SOYBEANS

SOYBEAN APHID: Results of the 2009 survey of soybean aphid populations are still being organized for publication in the August 21 issue of this bulletin. Preliminary review of the data indicates that 94% of the 247 surveyed fields did not develop economic infestations of 250 or more aphids per plant by the R2-R4 stages of growth. By contrast, 6% of fields distributed in Columbia, Dunn, Eau Claire, Marquette, Pepin, Pierce, Taylor, St. Croix and Wood counties did have economic populations.

None of the fields examined at the R2 (full bloom) stage early in the survey contained economic densities of aphids. It was not until the final week of July and first two weeks of August, once soybeans reached R3-R4 (beginning pod to full pod), that significant infestations were observed. A similar trend has been noted in the last 2-3 years. These findings suggest the annual survey should be initiated later in the season in order to more accurately assess peak aphid populations. However, surveys conducted in August are often complicated by spray operations and in some years outbreaks have developed as early as mid-July. Final results will be included in the next report.

PHYTOPHTHORA ROOT ROT: Fifty randomly selected soybean fields in the early vegetative stages of growth were sampled by Plant Industry Laboratory personnel from late June to early July. Preliminary analysis based on molecular testing of root DNA showed 9 of 50 symptomatic samples (18%) were infected with the root rot pathogen *Phytophthora sojae*. This figure is analogous to 2008 test results, when the pathogen was detected in 10 of 50 samples (20%). Results based on cultures and morphology are pending. A summary report will be published later this season.

FRUITS

APPLE MAGGOT: Numbers continue to surge above treatment thresholds in many Wisconsin orchards, particularly those in the southeast. Near Rochester in Racine County, counts of 20-32 flies per unbaited red sphere were registered during the previous three weeks, while traps in wild trees captured as many as 119 flies per week. The orchard near Mequon in Ozaukee County has reported similar record-high numbers of apple

maggot flies since the final week of July, with counts varying from 26-52 flies per baited red sphere per week.

JAPANESE BEETLE: An orchardist from Racine County reports leaf feeding and beetles on the 'Honeycrisp' and 'Lodi' apple varieties. Although adult populations are down in comparison to last year, these insects are still very prevalent in the southern counties. Spot treatment of individual trees should be considered for those orchards that continue to experience large numbers of beetles.

CODLING MOTH: Levels of this pest have been relatively high since the second flight began in southern orchards in late July. High counts for the week ranged from 31-36 moths per trap at Chippewa Falls and Richland Center, which compares to 38-57 moths per trap at the same locations last week. Spray schedules should be maintained as long as codling moths are numerous.

CRANBERRY REPORT: The condition of the Wisconsin cranberry crop improved with warm, mid-August temperatures. An irregular bloom period this season has resulted in uneven fruit development, heightening concerns about the impact on fruit size and yield at harvest. According to reports, it is not uncommon for individual beds to contain large berries, pea-sized fruits or even blossoms. Growers are advised to initiate tissue sampling routines in order to balance any nutrient shortages that may have developed in recent weeks.

VEGETABLES

CORN EARWORM TRAPS: Pheromone trap counts have been very low and sporadic since the first moths were registered during the first week of July. No significant flight activity was reported during the period of August 7-13. Counts were as follows: Chippewa Falls 4, Cottage Grove 2, Coon Valley X, East Bristol 2, Janesville 0, Lancaster 0, Madison 2, Manitowoc 5, Marshfield 1, Sparta 0, Sun Prairie 0, Token Creek 6, Tomah B 8, and Wausau 1.

CABBAGE LOOPER: Low numbers of moths continue to appear in traps at the Bourbonnais, IL, Chippewa Falls, East Troy and Newburg sites. Counts have ranged no higher than 7 moths per week since late May. The DATCP cabbage looper monitoring network has not observed large flights of this insect in the last two years.

WEEDS

VENICE MALLOW: Examination of plants in Dane County indicates that approximately 20% of seeds have reached maturity and will soon disperse from capsules. Seeds that have not been shed can still be removed, bagged, and destroyed to prevent new seedbank introductions.

WOOLY CUPGRASS: This annual grass, one of the most difficult weeds to control in Wisconsin, has begun to form seed. Control of wooly cupgrass is complicated by its potential to emerge late in the season and natural tolerance to many herbicides. According to UW Weed Scientist Chris Boerboom, the risk of crop yield loss and weed management costs are often greater for fields infested with wooly cupgrass. While the late-emerging plants observed in the past week pose no direct threat to the current crop, they will contribute to the seedbank and ensure future weed management problems.

Wooly cupgrass *Clarissa Hammond DATCP*

COMMON LAMBSQUARTERS: Growers with persistent lambsquarters problems should be aware that a single plant may produce as many as 100,000 seeds. This fact may compel some to implement aggressive control measures soon, since plants are now flowering across the state and are expected to shed their seeds by fall. Common lambsquarters was among the most prevalent weeds observed in row crops during surveys this season.

NURSERY & LANDSCAPE

OAK LEAF BLISTER: This common oak disorder, identifiable by blisters scattered over upper leaf surfaces and

corresponding gray depressions on the lower surfaces, was observed on red oaks in Grant County. The oak leaf blister fungus infects only expanding leaves in the spring; mature leaves are not susceptible. Blisters turn from yellow to reddish brown with pale yellow margins, eventually becoming dull brown with age. Heavy infection impairs the appearance of trees, but rarely endangers tree health. In special cases where prevention is desired, a fungicide spray can be applied in early spring, just before the buds begin to swell. Fungicides applied after bud break are ineffective.

Oak leaf blister on red oak Liz Meils DATCP

HERBICIDE DAMAGE: Inspections in Kenosha County found redbuds with symptoms of exposure to a phenoxy herbicide, a growth-regulator in the 2,4-D family. Drift and misapplication of herbicides is a common cause of injury to non-target trees and ornamentals in Wisconsin. Symptom expression and the severity of damage are strongly influenced by environmental conditions and vary according to the product's mode of action, dosage, duration of exposure and tree species. Some herbicides cause minor leaf abnormalities such as cupping or twisting, while others cause discolored foliage, severe defoliation, and eventual death. Injury at temperatures above 75°F often results in leaf scorch. Chemical treatments should never be applied when wind speeds exceed 7-8 miles per hour.

SPRUCE SPIDER MITES: Black Hills spruce at nurseries in Oneida County are reported to be showing symptoms of infestation. Similar to field crops, most deciduous trees and shrubs, conifers, ornamentals and houseplants can be colonized by spider mites. Affected foliage initially has a speckled or stippled appearance, later developing a dull, reddish-bronze cast. Although this species may have flourished during the extended period of cool temperatures experienced last month, the hot and humid weather of the past week has likely slowed activity considerably.

FOREST

EMERALD ASH BORER: One adult specimen was captured near Victory in Vernon County on June 4, the first beetle of the season. An additional 4 beetles have since been caught on traps in Brown and Crawford counties, and most recently in Kenosha County. Removal of the 6,893 purple panel traps established in Wisconsin as part of one of the largest emerald ash borer detection efforts in the U.S. has started in the south. USDA Animal and Plant Health Inspection Service (APHIS) guidelines specify that traps may be removed once the adult flight period has ended, usually by 1,500 degree days (base 50°F).

TRAPPING NETWORKS

BLACK LIGHT TRAPS: Numbers of western bean cutworm moths declined at some monitoring locations and increased at others. Arlington, Mazomanie and Sparta all reported lower counts than last week, while Manitowoc, Marshfield and Wausau registered higher numbers. Review of the 2009 adult flight data suggests that emergence probably peaked in the southern and central areas in the previous 1-2 weeks, somewhat later than the degree model predicts this event. Peak emergence of moths was documented in black light traps from July 25-August 7 in 2008, July 12-26 in 2007 and July 13-27 in 2006.

The second flight of European corn borers has accelerated slightly. The majority of moths should appear in traps by August 17 in the southern districts and August 22 in the central districts, although pupae and late instar larvae are still common in many areas.

APPLE INSECT & BLACK LIGHT TRAP COUNTS AUGUST 7 - 13

COUNTY	DATE	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	OBLR[5]	AM RED[6]	AM YELLOW[7]
Bayfield	8/07-8/13	Keystone	0	8	1	9	—	0	0
Bayfield	8/03-8/10	Bayfield Apple Co.	169	—	4	5	—	—	—
Bayfield	8/03-8/10	Orienta	166	0	0	4	—	0	0
Brown	8/07-8/13	Oneida	975	71	18	10	—	*1	*1
Chippewa	8/07-8/13	Chippewa Falls 2	—	—	36	—	—	—	—
Crawford	8/07-8/13	Gays Mills	92	27	6	6	0	*3	—
Dane	8/06-8/13	Deerfield	748	26	5	1	—	*4	*1
Dane	8/07-8/13	Stoughton	115	10	7.5	2	—	*3	*3
Dane	8/07-8/13	West Madison	414	23	0	6	—	*2	—
Dodge	8/07-8/13	Brownsville	—	—	—	—	—	—	—
Fond du Lac	8/07-8/13	Campbellsport	200	36	0	48	—	0	0
Fond du Lac	8/07-8/13	Malone	380	8	6	11	—	0	**0
Fond du Lac	8/10-8/13	Rosendale	92	26	0	1	—	*1	*3
Green	8/07-8/13	Brodhead	12	31	17	14	1	0	0
Iowa	8/07-8/13	Dodgeville	473		9	3	0	*7	*6
Iowa	8/07-8/13	Mineral Point	153	44	11	5	0	*15	0
Jackson	8/07-8/13	Hixton	64	26	2	17	0	0	2
Kenosha	8/07-8/13	Burlington	—	—	—	—	—	—	—
Marinette	8/07-8/13	Niagara	738	29	3	1	—	1.2	0
Marquette	8/07-8/13	Montello	15	11	0	0	—	*1	0
Ozaukee	8/07-8/13	Mequon	—	—	—	—	—	—	—
Pierce	8/07-8/13	Beldenville	—	—	—	—	—	—	—
Pierce	8/07-8/13	Spring Valley	—	—	—	—	—	—	—
Racine	8/07-8/13	Raymond	1436	11	14	6	—	0	0
Racine	8/07-8/13	Rochester	1000	7	15	0	—	*32	10
Richland	8/06-8/11	Hillpoint	250	5	7	5	—	*6	0
Richland	8/07-8/13	Richland Center	145	7	31	15	2	*3	—
Sauk	8/07-8/13	Baraboo	220	8	4	1	1	*2	—
Sheboygan	8/07-8/11	Plymouth	—	—	—	—	—	**13	—
Walworth	8/07-8/13	East Troy	10	2	0	1	—	1	0
Walworth	8/07-8/13	Elkhorn	40	3	0	5	—	1	0
Waukesha	8/07-8/13	New Berlin	936	4	11	7	—	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 red ball; **Baited red ball; [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	8/06-8/13	Chipp Falls	10	0	0	0	34	0	0	0	0	0
Columbia	8/07-8/13	Arlington	1	1	0	1	1	0	0	2	0	0
Dane	8/07-8/13	Mazomanie	1	1	0	2	0	0	0	13	1	0
Grant	8/07-8/13	Lancaster	0	0	0	0	0	0	0	2	0	0
Manitowoc	8/07-8/13	Manitowoc	0	13	3	0	5	0	3	15	6	0
Marathon	8/07-8/13	Wausau	5	5	0	9	146	1	0	13	9	8
Monroe	8/07-8/13	Sparta	0	0	0	8	0	0	0	68	1	0
Rock	8/07-8/13	Janesville	0	3	0	0	2	0	2	0	2	0
Walworth	8/05-8/13	East Troy	5	0	0	0	0	0	0	21	4	0
Wood	8/07-8/13	Marshfield	5	1	0	1	109	4	1	35	4	10

[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.