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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

Temperatures moderated during the last reporting period. Daytime highs were a few degrees below normal for early August and ranged from the 70s to lower 80s. After the historic heat and extreme humidity that persisted throughout July, the cooler weather and lower humidity levels were a welcome relief. Development of most crops continued to advance rapidly, and progress is now equivalent to or ahead of the 5-year average, despite spring planting delays. At the start of the week, 89% of the corn crop was at or beyond the silking stage, 7 percentage points behind last year but 5 points ahead of the 5-year average. Statewide, 53% of the soybean crop is setting pods, 1 percentage point behind last year and on par with the 5-year average. Harvesting of alfalfa, oats and sweet corn continued, with reports of minor infestations of European corn borer and corn earworm larvae in a small percentage of corn cobs.

LOOKING AHEAD

EUROPEAN CORN BORER: Egg deposition has intensified since the last report. The phenology model for this pest suggests that the peak in summer moth activity has occurred in the southern, central and west-central areas of the state. Susceptible corn fields should be inspected for egg masses and larvae before 2,100 degree days (base 50°F) are surpassed and the treatment window for second generation corn borers has closed.

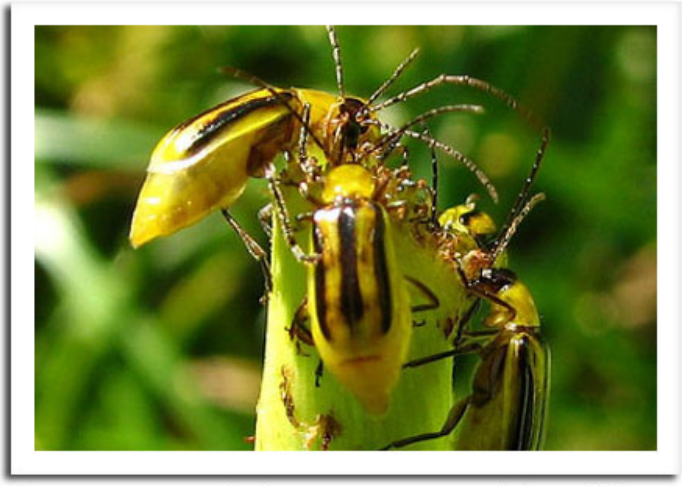
SOYBEAN APHID: Densities remain low for this time of year. A very small proportion of soybean fields have developed economic populations in the past two weeks, but most sites contain fewer than 40 aphids per plant. Foliar treatment should not be considered until the established threshold of 250 aphids per plant on 80% of the plants has been exceeded.

WESTERN BEAN CUTWORM: The annual flight of moths is now 75-100% complete statewide. As of August 10, the cumulative count was 3,466 moths in 171 traps. This figure is substantially lower than the 10,218 moths collected in 140 traps by the same time last year. Counts are expected to decline to very low levels at all monitoring sites by the third week of August.

CORN EARWORM: Significant activity was noted from July 28-August 10 in Dane and Waushara counties where 1,443 moths were registered in six pheromone traps. Sweet corn growers should view these counts as an early warning of potential earworm problems in silking corn fields.

CORN ROOTWORM: The late-summer beetle survey is now in progress and the results collected over the next two weeks are expected to reveal any significant chang-

es in the state beetle population. Surveys conducted in the southwest, south-central and central districts found counts of 0.1-8.9 beetles per plant, with an average of 1.3 per plant. Economic populations of 0.75 or more beetles per plant were documented in 25 of 62 sampled fields. Preliminary results indicate a marked increase in beetle populations in southern Wisconsin.



Western corn rootworm beetles k_d arvin flickr.com

FORAGES

POTATO LEAFHOPPER: Counts in alfalfa remain erratic. Individual fields in the southern half of the state have as few as 0.1 per sweep or as high as 3.4 per sweep. Regular monitoring in August is recommended since counts still vary widely and are not consistently above treatment thresholds.

PLANT BUG: Nymphs continue to be abundant in most fields, indicating that reproduction has not subsided in response to cooler weather in the past week. Populations range from 0.4-3.9 per sweep and average about 1.3 per sweep. The higher counts were found in Richland and Vernon counties.

CORN

CORN EARWORM: The significant migration that began three weeks ago has accelerated. Large flights of 80-700 moths were registered in Dane and Waushara counties since late July and treatments are underway. Trap counts for the two-week period of July 28-August 10 were: Chippewa Falls 6, Cottage Grove N 120, Cottage Grove S 80, East Troy 1, Hancock 190, Janesville 4, Keyeser 325,

DEGREE DAYS JANUARY 1 - AUG 10

LOCATION	50°F	2010	NORM	48°F	40°F
Dubuque, IA	2130	2247	—	1937	3370
Lone Rock	2044	2198	—	1795	3272
Beloit	2160	2344	—	1919	3414
Madison	1989	2176	1927	1781	3188
Sullivan	1991	2221	1963	1796	3187
Juneau	1915	2132	—	1730	3073
Waukesha	1780	2026	—	1743	2908
Hartford	1772	1990	—	1742	2879
Racine	1706	1983	—	1679	2819
Milwaukee	1692	1929	1773	1673	2784
Appleton	1727	1986	1787	1692	2813
Green Bay	1626	1841	1724	1675	2685
Big Flats	1761	1995	—	1681	2870
Hancock	1783	2023	1898	1689	2896
Port Edwards	1733	1951	1819	1672	2825
La Crosse	2001	2190	2088	1812	3209
Eau Claire	1823	2006	1885	1763	2949
Cumberland	1629	1818	1798	1621	2702
Bayfield	1290	1460	1401	1333	2265
Wausau	1588	1799	1734	1598	2631
Medford	1610	1790	1570	1597	2654
Crivitz	1529	1760	—	1566	2564
Crandon	1435	1627	1408	1439	2431

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

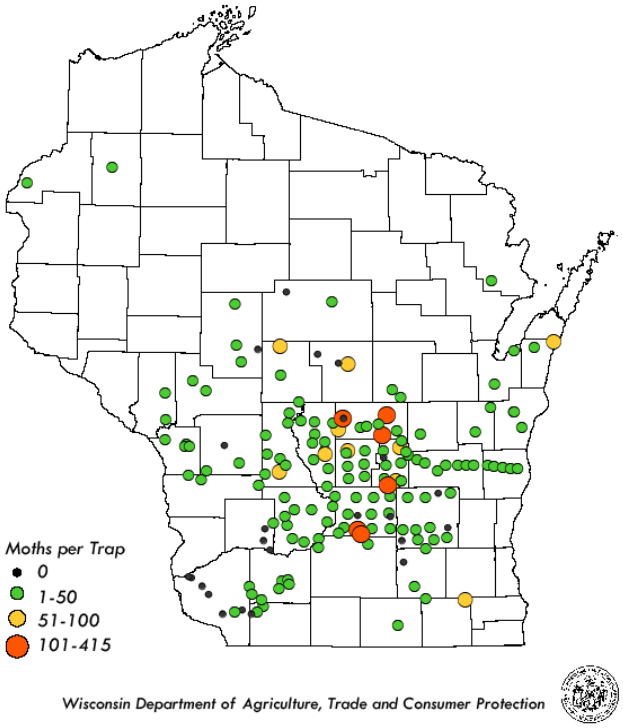
Madison 28, Marshfield 29, Prairie du Chien 6, Sun Prairie 700, and Wausau 0. A pheromone trap count of 10 moths for two consecutive nights indicates the need for protective treatment of sweet corn fields with green silks.

EUROPEAN CORN BORER: The summer flight of moths has peaked in the southern and central areas. Egg deposition is occurring on corn, snap beans, potatoes and other susceptible hosts. The treatment window for second generation corn borers is expected to close next week across the south. Management decisions must be made in the immediate future, before the larvae have bored into corn stalks and ears.

WESTERN BEAN CUTWORM: Moth collections have declined to low levels as the annual flight subsides. Preliminary results of the annual trapping survey show an unprecedented decrease in the state moth count, from 10,218 last year to 3,466 as of August 10. Cumulative counts for the 171 pheromone traps distributed through-

out Wisconsin are shown in the map below. Sites that registered 101 or more moths are represented by the orange symbols.

2011 Western Bean Cutworm Trap Counts



CORN ROOTWORM: Surveys yielded economic populations of 0.75 or more beetle per plant in 25 of 62 (40%) fields sampled in the southwest, south-central and southeast areas. This is a noteworthy increase from the 13% that had economic counts when the same sites were examined last season. Populations in Crawford, Grant, Iowa, Lafayette, Sauk and Vernon counties varied from 0.1-8.9 per plant and averaged 1.1 per plant. In Dodge, Jefferson and Rock counties, counts were similar and ranged from 0.1-8.5 per plant, with an average of 1.9 per plant. The high count of 8.9 beetles per plant was noted in the Bloomington area of Grant County. Final results of the annual survey should be available later this month.

SOYBEANS

SOYBEAN APHID: Surveys continue to indicate that populations remain below the established treatment threshold. Densities have increased since late July, but generally not to the point where control is required. The average count in 140 fields surveyed as of August 10 was 10.1 aphids per plant. Less than 5% of the sites had densities of 26-101 aphids per plant, 92% had 1-25 per plant, and 2% had no apparent population. Contrary to DATCP survey results, a few soybean fields may qualify for treatment and these must be evaluated immediately. The benefits of foliar treatment diminish beyond R5 (beginning seed) and control is not economical at R6 (full seed) or later.

Soybean aphids *Krista Hamilton DATCP*

TWO-SPOTTED SPIDER MITE: A reporter from Dane County states that mite infestations have been noted in soybeans in the Mt. Horeb and Sun Prairie areas. Mites are also appearing at scattered locations in the south-central region that were missed by rain last month.

FRUITS

APPLE MAGGOT: Counts have generally declined since emergence peaked 1-3 weeks ago. Fly activity has been comparatively low all season long. The high count for the week was 12 flies on a yellow sticky trap at Keystone in Bayfield County. Apple maggot emergence varies from year to year and populations could persist through Labor Day in some orchards. Continued maintenance of traps through early September is advised.

SPOTTED TENTIFORM LEAFMINER: Large flights were registered for the third week as the last flight of the season gained momentum. High counts for the week ranged from 731-849 moths per trap in Racine and Dane counties. The third flight is expected to peak shortly and should decline to low levels by late August.

CODLING MOTH: Degree day totals of 350-500 (base 50°F) have accumulated since the second biofix occur-

red. Controls for second generation larvae have been applied at most sites. Scouting is recommended for another 2-3 weeks, or 650-750 degree days post-biofix. Counts should not exceed five moths per trap per week.

STINK BUG: Nymphs are appearing in apple orchards and field crops statewide. Minor fruit injury has been reported from Columbia, Crawford and Dane counties in the past two weeks. Stink bug activity often escalates in August, so damage to fruits is a distinct possibility this month. The brown stink bug (*Euschistus servus*) is one of the more prevalent species at this time. This common, native pest should not be mistaken for the invasive brown marmorated stink bug (*Halomorpha halys*), which has not yet been found in any Wisconsin orchard.

Brown stink bug Jimmy Smith jwinfred flickr.com

SAN JOSE SCALE: Second generation crawlers are active. Damage by this pest can increase exponentially from one generation to the next and problems may persist through mid-September. Orchards that experienced problems with the first scale generation earlier this season are at increased risk for damage by the second generation.

VEGETABLES

COLORADO POTATO BEETLE: Emergence of second generation beetles has begun in portions of northern Wisconsin. In the southern and central areas, larval development continues. Late-season control may be warranted if defoliation exceeds 30% during tuber formation. Treatments should be applied when most of the population is in the intermediate third instar stage, presuming this does not conflict with label recommendations or resistance management. Proper timing permits most eggs to hatch, but kills the larvae before they reach the destructive fourth instar stage. Potato producers are reminded to avoid consecutive use of a single product or use of multiple products with similar modes of action.

Colorado potato beetle larvae Ian Marsman bugguide.net

CABBAGE LOOPER: Larvae produced by migrants that arrived last month are in the late instars and their defoliation should be evident in home gardens and commercial cabbage plantings. Scouting on a weekly basis through early September is recommended. 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.

CUCURBIT DOWNY MILDEW: This disease was confirmed on cantaloupe and watermelon in Dane County last week, representing the second reported case in Dane County this season. According to the IPMpipe website at http://cdm.ipmpipe.org , there is a high risk of disease development in cucurbits near Wisconsin infection sources and a minimal risk in most other areas.

WEEDS

VOLUNTEER CORN: A statewide survey for volunteer corn in soybean fields began last week. Preliminary results suggest that the problem has increased in some areas of the state and decreased in others. Infestation rates in Chippewa, Columbia, Dodge, Eau Claire, Green Lake, Jackson, Marquette, Rock and Trempealeau counties varied from 25-75%, which compares to 35-46% when the survey was last conducted. Since 2008, about

45% of Wisconsin soybean fields have been infested with glyphosate-resistant volunteer corn annually. Based on these initial results, it appears efforts to raise awareness of the consequences of planting Roundup Ready corn and soybeans in rotation have been only moderately effective.

PLUMELESS THISTLE: This biennial pasture weed is entering the seed production phase in southern Wisconsin. Mowing pasture lands to eliminate plants should occur before seeds develop to prevent further dissemination. Digging plants 1-2 feet below the soil surface is another effective yet labor-intensive strategy. Controls should be implemented while thistle densities are low, before plants spread and degrade pasture quality.

Plumeless thistle *Clarissa Hammond DATCP*

NURSERY & FOREST

JAPANESE BEETLE: Nursery operators and homeowners continue to report severe damage to linden trees, roses, and numerous other ornamental plants. Adequate soil moisture levels favored grub survival from last season and may be one of the factors contributing to the outbreaks this season. Peak emergence has occurred in most areas and populations should decline by the end of the month.

ASTER YELLOWS: Symptoms of this disease were noted on eastern purple coneflower in Chippewa County. Aster yellows is caused by an organism known as a phytoplasma and is transmitted by leafhoppers, principally the aster leafhopper. Signs of infection include abnormal flowers, irregular stem growth, and ray and disk petals that are green and much smaller than petals on uninfected plants. These diagnostic indicators are more apparent now that plants are in full bloom. The aster yellows phytoplasma persists in both wild and cultivated coneflowers and other perennial or biennial host plants over the winter, thus infected plants may act as reservoirs. Removal and destruction of infected plants is recommended.

Aster yellows on purple coneflower *Konnie Jerabek DATCP*

DOGWOOD SAWFLY: Larvae were observed on the foliage of redosier dogwoods in Dane County. At this time of year, defoliation has usually progressed to the point that most leaf tissue has been fully consumed and only the midvein remains. Chemical control is effective against early-instar larvae (less than ¾ inch), but is no longer advised. Varieties most susceptible to sawfly infestation are the gray and redosier dogwoods.

Dogwood sawfly larvae on redosier dogwood *Konnie Jerabek DATCP*

APPLE INSECT & BLACK LIGHT TRAP COUNTS AUGUST 4 - 10

COUNTY	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	OBLR[5]	AM RED[6]	YELLOW[7]	GDD 50°F
Bayfield	Keystone	31	13	0	1	—	*2	*12	
Bayfield	Orienta	56	1	0	0	—	0	0	
Brown	Oneida	200	13	13	7	—	0	0	
Chippewa	Chippewa Falls	—	—	—	—	—	—	—	
Columbia	Rio	378	225	30	0	—	—	—	
Dane	Deerfield	849	19	0	0	—	*0	*0	
Dane	Mt. Horeb	6	93	1	10	—	0	0	
Dane	McFarland	0	0	5	2	—	—	—	
Dane	Stoughton	68	82	4	5	0	*0	**2	1853
Dane	West Madison	—	—	—	—	—	—	—	
Fond du Lac	Campbellsport	110	17	0	22	—	0	0	
Fond du Lac	Malone	80	27	4	8	—	0	0	
Fond du Lac	Rosendale	—	—	—	—	—	—	—	
Grant	Sinsinawa	8	44	19	0	—	0	0	
Green	Brodhead	14	15	3	2	0	0	0	
Iowa	Mineral Point	265	70	8	6	0	0	0	1966
Jackson	Hixton	—	—	—	—	—	—	—	
Kenosha	Burlington	185	41	20	8	—	0	0	1741
Marinette	Niagara	116	6	16	0	—	2	1	1441
Marquette	Montello	132	2	1	0	—	*0	*0	
Ozaukee	Mequon	50	23	12	4	—	*3	*0	1754
Pierce	Beldenville	—	—	—	—	—	—	—	
Pierce	Spring Valley	116	11	5	1	0	*1	*0	
Polk	Turtle Lake	165	0	8	0	—	**5	*0	
Racine	Raymond	731	47	8	5	—	*0	*0	
Racine	Rochester	94	42	9	2	—	*8	*0	
Richland	Hillpoint	404	26	10	6	0	**3	**1	
Sheboygan	Plymouth	—	—	—	—	—	—	—	
Walworth	East Troy	10	2	1	5	—	**0	**0	
Walworth	Elkhorn	5	0	0	10	—	**0	**0	
Waukesha	New Berlin	314	41	11	9	—	*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]
Chippewa	Chippewa Falls	33	1	0	0	6	0	2	18	0	0
Columbia	Arlington	16	2	1	0	1	0	1	6	4	0
Dane	Mazomanie	6	2	1	0	2	3	0	3	1	0
Grant	Prairie du Chien	18	0	0	0	0	0	0	3	1	0
Manitowoc	Manitowoc	0	14	5	0	0	0	7	2	39	33
Marathon	Wausau	6	4	2	2	99	0	1	44	25	0
Monroe	Sparta	5	0	0	3	0	4	0	18	0	0
Rock	Janesville	15	14	1	0	1	0	13	0	11	0
Walworth	East Troy	6	0	0	0	8	4	1	24	10	0
Wood	Marshfield	5	15	2	0	21	2	12	20	45	0
Vernon	Coon Valley	12	5	0	0	19	4	0	0	0	4

[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.