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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

Abnormally cool weather continued for the fourth successive week, threatening prospects for late-planted field crops which need several more weeks of summer heat to mature. Daily maximum temperatures were about 3-10 degrees below-normal and ranged from the 60s in the north-central area to the lower 70s in western Wisconsin. Minimum temperatures varied from the mid-30s to lower 50s in most areas, but stayed above freezing. Light to moderate rainfall early in the week maintained overall adequate levels of moisture for developing crops in the southern and eastern counties, while moisture remained mostly short or very short in the western region. Temperatures across the state have been below-average since July 23 and according to the Climate Prediction Center's monthly temperature outlook, the cool weather trend is likely to continue throughout the month of August.

LOOKING AHEAD

WESTERN BEAN CUTWORM: The annual flight is now 75-100% complete across nearly all of the state. As of August 14, the cumulative count was 584 moths in 116 traps, or five per trap. This figure is substantially lower than the 3,290 moths collected in 132 traps (25 per trap) by the same time last year. A few moths may continue to appear in the east-central and northern areas for another week or two, but the flight has effectively ended over southern Wisconsin.

CORN EARWORM: Large flights of 260 moths were registered in Dane and Fond du Lac counties again this week. The risk of egg laying is likely to continue through late August, so regular scouting and control measures are still in order. Sweet corn is susceptible to infestation as long as green silks are present.

CORN ROOTWORM: The August beetle survey is now in progress and the results collected over the next two weeks are expected to reveal any significant changes in the state beetle population. Surveys conducted in the southwest, south-central and southeast districts found counts of 0-8.0 beetles per plant, with an average of 0.7 per plant. Economic populations of 0.75 or more beetles per plant were documented in 21 of 101 fields sampled. Preliminary results show a very minor decrease in beetle populations in southern Wisconsin.

EUROPEAN CORN BORER: Moth collections have increased at a few black light trap locations since the last report, with a weekly high count of 60 moths reported near Chippewa Falls. The phenology model for this pest suggests that the peak of summer moth activity has occurred in the southwest, south-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 closes.

LATE BLIGHT: Potato fields infected with late blight have been found in Adams, Brown, Dunn, Juneau, Langlade, Portage and Waushara counties as of August 15. Three cases of the disease on tomato have also been confirmed in Brown, Racine and Sauk counties. Potato growers should continue to treat potatoes on a 5- to 7-day schedule as long as the forecasting system indicates weather conditions are conducive for late blight development. Home gardeners are advised to inspect plants on a daily basis for leaf lesions and fruit spots. If late blight is suspected and symptoms are widespread, plants should be destroyed to limit further spore production.

Late blight spoulation on underside of potato leaf *UW Extension*

FORAGES

POTATO LEAFHOPPER: Counts remain below-threshold in all surveyed areas, rarely exceeding 1.5 per sweep. Levels of this insect have been non-economic all season long, despite a timely spring arrival and favorable temperatures in June and July. Routine monitoring is still recommended through early September.

PLANT BUG: Nymphs were less abundant in fields sampled this week, indicating reproduction has slowed in response to the cooler weather of the past several weeks. Populations ranged from 0.1-1.4 per sweep and averaged about 0.4 per sweep. The alfalfa plant bug is currently the more common of the two main plant bug species found in alfalfa.

PEA APHID: In contrast to other alfalfa pests, counts of this insect have increased slightly in response to this month's cool and mostly dry weather, which favors aphid population growth. The average count from August 9-14 was four per sweep, although densities varied from 1-12 per sweep. The higher counts were found in Monroe and Vernon counties.

DEGREE DAYS JANUARY 1 - AUG 14

LOCATION	50°F	2012	NORM	48°F	40°F
Dubuque, IA	1912	2544	2091	1953	3078
Lone Rock	1847	2489	—	1868	3002
Beloit	2032	2620	2125	2017	3222
Madison	1848	2506	2025	1898	2994
Sullivan	1839	2485	2008	1892	2983
Juneau	1728	2406	—	1835	2850
Waukesha	1659	2286	—	1756	2767
Hartford	1618	2263	—	1718	2716
Racine	1641	2269	—	1755	2751
Milwaukee	1599	2227	1923	1710	2694
Appleton	1611	2243	1951	1701	2682
Green Bay	1529	2152	1814	1627	2595
Big Flats	1613	2249	—	1648	2676
Hancock	1631	2271	1966	1689	2695
Port Edwards	1571	2197	1929	1648	2809
La Crosse	1809	2467	2214	1819	2937
Eau Claire	1687	2275	1995	1767	2745
Cumberland	1493	1971	1869	1564	2481
Bayfield	1095	1655	—	1135	1962
Wausau	1442	1988	1830	1522	2426
Medford	1478	1979	1675	1562	2462
Crivitz	1417	1986	—	1491	2426
Crandon	1319	1760	1428	1369	2233

Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2013. NORMALS based on 30-year average daily temps, 1981-2010.

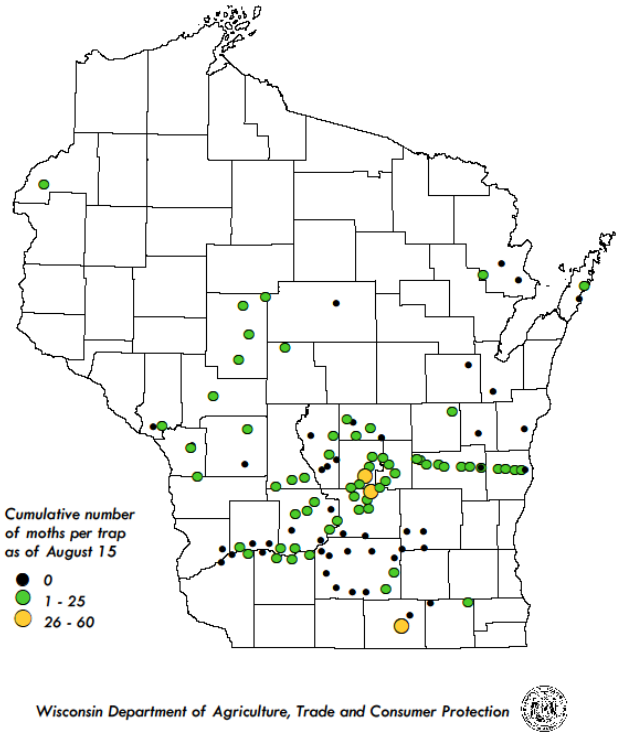
CORN

CORN ROOTWORM: The annual beetle survey continued during the last reporting period. Preliminary results from the southern crop districts show a very slight decrease in counts as compared to 2012. Although individual fields in Columbia, Grant, Lafayette, Rock and Walworth counties contained very high adult populations in the range of 3.0 or more beetles per plant, most sites had non-economic counts of less than 0.5 per plant. The average is 0.6 per plant in the southwest district, 0.8 per plant in the south-central district and 0.8 per plant in the southeast district. A count of 0.75 or more beetles per plant signals the potential for severe root feeding dam-

age to non-Bt, continuous corn next season. Economic populations were found in 21 of the 101 fields surveyed as of August 14.

WESTERN BEAN CUTWORM: Moth collections have declined to low levels as the annual flight subsides. Preliminary results of the annual trapping survey show a considerable decrease in the state moth count, from 3,290 last season to 584 as of August 15. Cumulative counts for the 116 pheromone traps distributed throughout Wisconsin are shown in the map below. The highest individual count for the 10-week monitoring period was only 60 moths near Montello in Marquette County.

2013 Western Bean Cutworm Trap Counts



Wisconsin Department of Agriculture, Trade and Consumer Protection

CORN EARWORM: The significant migration that began last week has accelerated at some sites. Large flights of 85-260 moths were registered in Dane and Fond du Lac counties and treatments are underway. Trap counts for the period of August 8-14 were: Chippewa Falls 2, Coon Valley 0, Cottage Grove N 18, Green Lake 51, Janesville 1, Marshfield 7, Mazomanie 0, Manitowoc 1, McFarland 260, Ripon 85, Sun Prairie N 260, Sun Prairie W 63, and Watertown 31.

EUROPEAN CORN BORER: Second generation larvae are appearing in the ear tips of corn. Surveyed fields in the southwest and west-central counties had 3-25% of the ears infested with 1-2 larvae, which varied from newly hatched to third instar. The treatment window for second generation larvae remains open for approximately one more week across the southern half of the state. Controls directed against the summer generation 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.

CORN LEAF APHID: Light colonies are common on corn in the southern and central counties where approximately 5-20% of the plants are infested with 20-45 aphids per plant. Densities of 50 or more aphids per plant on 50% of the plants may interfere with pollination.

Corn leaf aphids *Tom Harvey insects.tamu.edu*

SOYBEANS

SOYBEAN APHID: Densities remain low in most Wisconsin soybean fields. The average count at 56 sites surveyed from August 6-14 was 22 aphids per plant. Only six fields had densities of 65-238 aphids per plant, while all others contained fewer than 35 per plant. Most soybeans will not require treatment this year, but exceptions will inevitably occur and fields must be evaluated in the next two weeks. The benefits of foliar treatment diminish beyond R5 (beginning seed) and control is not economical at R6 (full seed) or later.

JAPANESE BEETLE: This beetle is still common over a wide area of the state. Defoliation levels in Dane, Grant, Green, Iowa, Kenosha, Lafayette, Racine, Richland, Rock and Walworth counties varied from 2-20% in the past week, which is below the 35% threshold for soybeans in the seed-fill stages.

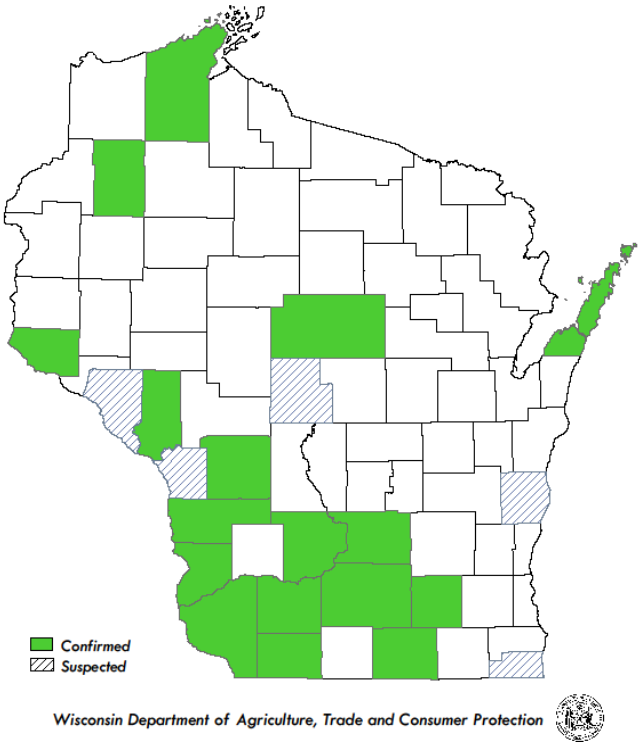
FRUITS

SPOTTED WING DROSOPHILA: The list of counties with confirmed SWD infestations continues to grow. Counties reporting new SWD detections in the past week include: Grant, Jefferson, Marathon, Monroe, Lafayette, Pierce and Washburn. The finds in Marathon and Lafayette counties are the first documented reports of SWD in those counties and represent new county records.

Recommended controls for conventional small fruit growers consist of repeated insecticide applications at 4- to 5-day intervals. A list of insecticide options can be found on the UW-Madison SWD website at http://labs.russell.wisc.edu/swd/management-2/. For organic operations, the OMFI-approved insecticides PyGanic and Entrust are available for SWD control.

Spotted wing drosophila has now been confirmed in Bayfield, Columbia, Crawford, Dane, Door, Grant, Iowa, Jefferson, Lafayette, Marathon, Monroe, Pierce, Racine, Rock, Sauk, Trempealeau, Vernon and Washburn counties for a total of 18 counties since the first larvae were detected during the last week of June.

2013 Spotted Wing Drosophila Infestations



APPLE MAGGOT: Emergence and oviposition may have peaked in the southern and central areas. One-half of the apple maggot population is expected to appear by 1,600 heat units (base 50°F) suggesting that 50% emergence should occur by August 17 across the southern half of the state. Fly counts increased abruptly from August 1-8 and remained comparatively high this week. The highest weekly total thus far is 25 flies on a baited red sphere at Gays Mills in Crawford County. Apple maggot flies are likely to persist in orchards through September, so continued maintenance of red sphere traps will be required.

STINK BUG: Minimal activity has been reported or observed in fruit crops to date. Stink bug populations are likely to increase this month, especially in orchards with ground covers or adjacent to uncultivated areas. Apple growers should begin scouting fruits for the dimples or dark, irregular circular depressions typical of stink bug feeding and flag sites with multiple depressions on the same fruit or tree. Damage by this pest is often limited to specific areas in the orchard and depending on the distribution of the population, spot treatment may be adequate. Apple growers should not mow cover crops or weeds when stink bugs are present to prevent the insects from moving into the trees.

Brown stink bug *Jimmy Smith flickr.com*

VEGETABLES

CUCURBIT DOWNY MILDEW: This disease was diagnosed on melon and winter squash in Jefferson County on August 13, representing the first confirmed case of CDM in the state this season. There have been no additional detections of the disease on commercial, home garden, or sentinel cucurbit, but Extension Vegetable Plant Pathologist, Dr. Amanda Gevens reports that the southern tier of Wisconsin may have received inoculum

about one week ago. She advises cucurbit growers to carefully inspect leaf undersides for dense, brownish-gray, sometimes purplish masses of sporulation. Leaf samples with CDM symptoms can be submitted for diagnosis to the Plant Disease Diagnostic Clinic or to the UW Vegetable Pathology Laboratory, 1630 Linden Dr. Rm. 689, Madison, WI 53706.

CABBAGE LOOPER: Migrants are appearing in low numbers in pheromone and black light traps as far north as Chippewa Falls. 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.

NURSERY & FOREST

SUNFLOWER MOTH: This destructive, migratory sunflower pest was reported by a nursery inspector on Coneflower 'After Midnight' in St. Croix County. The larvae initially feed on the florets and later burrow into individual seeds, creating ideal entry sites for the Rhizopus head rot fungus. An indicator of infestation is the presence of tangled mats of webbing on the flower surface. Control consists of an insecticide application made shortly after the flowers open, with subsequent treatments as needed. Removal of infested flower heads is also advised.

Sunflower moth damage on coneflower *Konnie Jerabek DATCP*

LIRULA NEEDLECAST: Light to moderate amounts of this needlecast disease were apparent on the lower branches of balsam firs in Sawyer County. Lirula is easily identified by a single longitudinal row of dark spores along the midrib on the undersides of second- and third-year needles. Environmental conditions that favor its development are high humidity, low temperatures and overcrowding or inadequate spacing. As with most fungal disorders, measures that increase air circulation are usually effective in preventing new infections.

SAPSUCKER DAMAGE: This member of the woodpecker family was the cause of severe damage to 'Acolade' elm trees in St. Croix County nursery. Sapsuckers peck holes in trees and larger woody shrubs, feeding on the bark, sap and insects drawn to the sap. Their holes generally are not harmful, but some trees or shrubs may die if damage is extensive enough to girdle the trunk or stem. This was the case in St. Croix County where several three-inch diameter trees were rendered unfit for sale.

Sapsucker damage *Konnie Jerabek DATCP*

WOOLLY APPLE APHID: Nursery inspections in the past week found moderate infestations of this aphid, as well as their sticky honeydew, on the branches of crataegus hawthorns in St. Croix County. Woolly apple aphids feed at wound sites (e.g. pruning cuts and cankers) on the trunks and branches of trees, causing knots or galls to form on the twigs. Underground colonies also form galls on the roots in some situations. Control is usually not warranted as there are many natural enemies that regulate populations. Other hosts include apple, elm, mountain ash and pear.

APPLE INSECT & BLACK LIGHT TRAP COUNTS AUGUST 8 - 14

COUNTY	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	AM RED[5]	YELLOW[6]
Bayfield	Keystone	35	9	0	3	11	14
Bayfield	Orienta	343	3	0	2	0	0
Brown	Oneida	—	—	—	—	—	—
Columbia	Rio	—	—	—	—	—	—
Crawford	Gays Mills	—	—	—	—	—	—
Dane	Deerfield	580	0	0	0	0	0
Dane	McFarland	—	—	—	—	13	0
Dane	Mt. Horeb	260	6	8	13	0	0
Dane	Stoughton	178	8	22	5	0	0
Dane	West Madison	106	16	17	13	0	0
Fond du Lac	Campbellsport	75	34	0	3	0	0
Fond du Lac	Malone	—	—	—	—	—	—
Fond du Lac	Rosendale	46	3	0	0	0	1
Grant	Sinsinawa	38	0	10	5	0	1
Green	Brodhead	18	14	4	1	0	0
Iowa	Mineral Point	550	20	26	21	0	4
Jackson	Hixton	42	0	2	4	0	0
Kenosha	Burlington	415	9	1	14	2	—
Marathon	Edgar	—	—	—	—	—	—
Marinette	Niagara	126	14	0	0	6	1
Marquette	Montello	79	0	0	0	0	0
Ozaukee	Mequon	175	5	7	0	*0	—
Pierce	Beldenville	85	11	3	0	1	2
Pierce	Spring Valley	66	20	7	1	**8	0
Polk	Turtle Lake	71	19	3	0	0	0
Racine	Raymond	—	—	—	—	—	—
Racine	Rochester	270	4	14	1	1	2
Richland	Hillpoint	810	1	12	10	**6	**1
Sheboygan	Plymouth	—	—	—	—	—	—
Walworth	East Troy	—	—	—	—	—	—
Walworth	Elkhorn	—	—	—	—	—	—
Waukesha	New Berlin	—	—	—	—	—	—

[1]Spotted tentiform leafminer; [2]Redbanded leafroller; [3]Codling moth; [4]Obliquebanded leafroller; [5]Apple maggot red ball; *Unbaited AM trap; **Baited AM trap; [6]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	60	0	8	0	0	0	1	7	0	0
Columbia	Arlington	0	0	0	0	0	0	0	0	0	0
Crawford	Prairie du Chien	0	0	0	0	7	0	0	1	3	0
Dane	Mazomanie	1	0	1	0	7	0	0	0	1	0
Fond du Lac	Ripon	4	0	0	0	0	2	0	5	0	0
Manitowoc	Manitowoc	0	1	0	0	0	0	0	0	14	42
Marathon	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	Sparta	—	—	—	—	—	—	—	—	—	—
Rock	Janesville	5	1	0	0	0	0	5	0	1	0
Walworth	East Troy	0	1	0	0	9	0	0	1	0	0
Wood	Marshfield	0	0	0	1	7	0	2	2	1	1

[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.