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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 weather and mild temperatures prevailed this week as southern Wisconsin began to emerge from record floods. Several roads and bridges are still closed, and 9 counties remain under a flood warning. Receding floodwaters have exposed millions of dollars worth of damage to agricultural lands and numerous alfalfa, corn and soybean fields have large areas that are eroded, submerged in mud or remain flooded. Farmers resumed planting and field maintenance early in the week, applying herbicide or fertilizers to fields that were planted before the rains or were previously too wet. Although insects are a minor consideration compared to the damage caused by excessive rain and strong winds this month, populations are at a point where serious problems could develop rapidly in areas of the state that experience hot weather in the week ahead.

LOOKING AHEAD

APPLE MAGGOT: Visual traps to monitor the emergence of apple maggot flies should be placed at this time. The first flies of the season may begin to appear by June 25 near Beloit, July 1 near Madison, and July 4 near Racine, following the accumulation of 900 degree days (base 50°F). Orchards that suffered hail damage during storms in the past two weeks are advised to bait traps with an ammonia attractant to enhance the effectiveness. This fruit fly, potentially the most damaging insect in Wisconsin orchards, can be differentiated from similar species by an F-shaped wing banding pattern and a prominent white spot on the thorax.

EUROPEAN CORN BORER: The treatment window for first generation corn borer larvae is expected to open in portions of the southern districts where 800 degree days (base 50°F) are surpassed next week. Insecticides directed against the larval stages must be applied after egg hatch and before tunneling into stalks and midribs begins.

POTATO LEAFHOPPER: Continued warm temperatures favorable for the development of this insect could stimulate a rapid increase in populations before the end of the month. Production of nymphs is underway in second growth alfalfa fields.

WESTERN BEAN CUTWORM: Pheromone traps were established along highways and county roads at 73 locations in Adams, Columbia, Dane, Dodge, Fond du Lac, Green Lake, Iowa, Marquette, Richland, Sauk and Sheboygan counties this week. Monitoring efforts are being concentrated in the central counties where the highest numbers of western bean cutworm moths were registered last season. Look for weekly counts

in the July and August issues of the Wisconsin Pest Bulletin and on the Iowa State University WBCW Monitoring Network website at http:www.ent.iastate.edu/trap/westernbeancutworm/isite.

ROSE CHAFER: These beetles were found to be skeletonizing grape leaves in the south central counties on June 18. The adults deposit eggs in the soil that hatch into grubs that feed on the roots of garden plants. Expect activity to increase during the next 3 weeks in the sandy areas of the state.

Rose chafer www.extension.umn

MONARCH BUTTERFLY: Following a 2,100 mile migration from central Mexico, the first migrant butterflies were observed on June 12 in Dane County.

EASTERN TENT CATERPILLAR: Numerous moths are appearing in black light traps and at lights. Emergence of adults should begin in full next week, once 750 degree days have been reached in the southern half of the state.

HOUSE CENTIPEDE: A report from Columbia County notes that these arthropods have become a nuisance in basements in the area. House centipedes are predaceous on other insects and are of little consequence to homeowners.

FORAGES

POTATO LEAFHOPPER: Nymphs were noted for the first time this season on June 16 in Dane County. Populations continue to be less than 0.9 per sweep (18 per 20 sweeps), except in occasional alfalfa fields. Circumstances do not justify treatment in any field surveyed thus far, but development of this insect should accelerate with warmer temperatures forecast for late next week.

ALFALFA WEEVIL: Larval numbers in second growth alfalfa are declining due to pupation, with 0.8-1.5 per sweep being the typical count. Most of the larvae collected by sweeping have been 3rd and 4th instars. Tip feeding injury ranged from 10-40% over the south central and central counties.

PEA APHID: Surveys this week found some variability in aphid numbers between individual fields. Representative counts were 1.0 per sweep in Iowa and Grant counties, 2.5 per sweep in La Crosse and Monroe counties, 3.2 per sweep in Juneau and Adams counties, 3.5 per sweep in Columbia and Dodge counties, and 0.8 per sweep in Manitowoc and Sheboygan counties. The highest population detected was 7.9 per sweep in 12 inch regrowth in Juneau County.

DEGREE DAYS MARCH 1 - JUNE 19

LOCATION	50°F	2007	NORM	48°F	40°F
Dubuque, IA	776	1043	—	823	1417
Lone Rock	706	992	—	734	1290
Beloit	809	1020	—	835	1443
Madison	693	948	859	729	1275
Sullivan	761	915	858	782	1365
Juneau	714	905	—	742	1292
Waukesha	682	881	—	713	1261
Hartford	659	891	—	688	1231
Racine	608	840	—	645	1181
Milwaukee	593	845	696	629	1159
Appleton	615	865	747	642	1156
Green Bay	555	779	717	584	1092
Big Flats	641	900	—	645	1159
Hancock	643	873	862	652	1165
Port Edwards	600	879	803	608	1105
La Crosse	687	1054	931	725	1257
Eau Claire	597	947	826	617	1123
Cumberland	498	872	779	497	978
Bayfield	350	616	552	338	765
Wausau	529	805	734	528	1002
Medford	491	785	654	490	956
Crivitz	498	746	—	512	1002
Crandon	460	725	619	444	893

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

PLANT BUG: Mixed populations of the tarnished plant bug, alfalfa plant bug and rapid plant bug in alfalfa regrowth average 0.6 per sweep, which is well below the economic threshold of 5 per sweep. Nymphs of various maturities were observed in all fields surveyed and many are entering the last instar.

ASH-GRAY BLISTER BEETLE: This beetle was collected from a few alfalfa fields in the central areas at the rate of 1-4 per 20 sweeps near the margins. Blister beetles contain the toxic compound cantharidin, which is lethal to horses at low doses. Toxicosis may occur if beetles or contaminated hay are ingested.

Ash gray blister beetles *insects.tamu.edu*

MEADOW SPITTLEBUG: Adults are appearing in second growth alfalfa in the southern half of the state. Several alfalfa fields in Columbia, Dane, Dodge and Marquette counties were sampled, and all yielded 1-2 adults per 20 sweeps. In northern Portage County no adults were noted, but final instar nymphs were common in the fields checked.

CORN

TRUE ARMYWORM: A definite potential exists for damaging populations in corn, small grains, peas and other crops, particularly in the southern counties. Surplus rainfall and strong winds this month delayed the application of herbicides, and as a result numerous fields have developed dense grassy foliage favorable to larval feeding. Small grains lodged during storms in the previous two weeks also are at risk for developing localized outbreaks. Moderate infestations of 9-11 larvae per 100 plants were detected in the margins of Columbia County corn fields on June 19, indicating armyworms have started to move into fields in appreciable numbers. Close surveillance in the next week is strongly advised.

Grassy corn field susceptible to armyworm attack *Krista Hamilton DATCP*

STALK BORER: Damage is apparent on a small percentage of plants in individual fields, principally along the margins. Less than 5% of the plants were affected in corn checked in Columbia, Dodge and Vernon counties, and in Dane County some fields were noted to have 9% of the plants in the edge rows infested with 3rd instar larvae.

Stalk borer larva *Krista Hamilton DATCP*

EUROPEAN CORN BORER: The most advanced corn is now susceptible to infestation by first generation larvae. Egg masses were detected in 18-22 inch fields in Dane and Columbia counties at the rate of 1-2 egg masses per 100 plants. Larval feeding on the whorl leaves should become evident in the tallest corn in the week ahead. The treatment window for first generation corn borers is projected to open during the week of June 22 in southern

locations where totals of 800 degree days (base 50°F) are surpassed, including Beloit, Madison, Sullivan and Waukesha.

Leaf feeding by 1st instar ECB larva *Krista Hamilton DATCP*

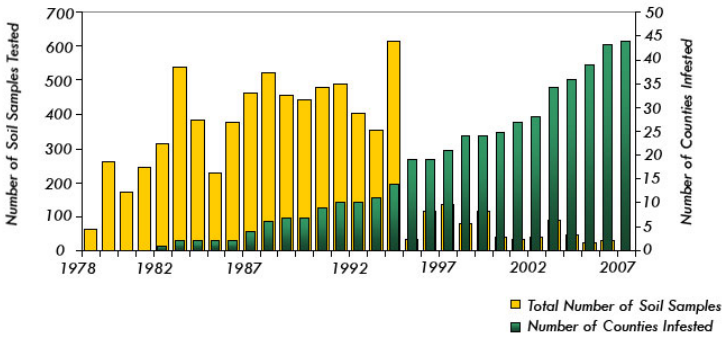
SOYBEANS

SOYBEAN APHID: This insect has begun to colonize soybean fields in south central Wisconsin. Alates (adults) and nymphs were detected on 6% of the plants in a field surveyed near Rio in Columbia County and on 1% of the plants in a field near Lowell in Dodge County on June 18. A total of 39 aphids were counted in the Rio field and 34 in the Lowell field, for a mean of 0.39 and 0.34 per plant, respectively. The range was 2-34 aphids per infested plant. Twenty additional V1-V2 fields examined in Columbia, Dane, Dodge, and Vernon counties had no detectable population of soybean aphids.

Soybean aphids, Dodge County June 18, 2008 *Krista Hamilton DATCP*

SOYBEAN CYST NEMATODE (SCN): The accompanying chart shows a gradual increase in the number Wisconsin counties infested with SCN since soil testing efforts were initiated in 1978. The spread of this soybean pest from county to county is being documented as part of the ongoing SCN survey. Although 44 Wisconsin counties are considered to be infested with SCN, the nematode populations within those counties are variable and fields should be assessed on an individual basis. The UW-Madison Department of Agronomy, in cooperation with the Wisconsin Soybean Marketing Board, is offering free soil testing for SCN this season. Growers are urged to contact Colleen Smith at clsmith8@wisc.edu or by calling (608) 262-7702 to request test packets. Refer to the previous bulletin issue for additional SCN sampling information.

Wisconsin Soybean Cyst Nematode Survey Results 1978-2008



WEEDS

MUSK THISTLE: Tall flowering stalks are appearing within pastures, along roadside ditches, and in roadway medians in southern areas of the state. Musk thistle is an aggressive biennial weed that spreads only by seed, resulting in a clumped pattern of development over time. Populations are particularly difficult to control in pasture settings where cattle avoid consuming the prickly leaves, but brush against the plants and aid in seed dispersal. Mowing is recommended to reduce the vigor of stands and minimize seed production.

WEED SURVEY IN CORN: A survey of weeds in corn is currently underway, with the purpose of estimating yield loss from weed competition and determining the point at which post-emergence weed management occurs. DATCP field specialists are visiting 48 corn fields in Columbia, Dane, Dodge, Fond du Lac, Grant, Jefferson, Iowa, Outagamie, Sheboygan, and Winnebago counties at 3-day intervals to document the average height and

density of the most common and pervasive weeds, including velvetleaf, common lambsquarters, common ragweed, giant ragweed and grasses.

Examination of V4-V6 fields during the July 12-16 survey period found that most broadleaf weeds were less than 6 inches tall, although a few had reached 8-12 inches. Grasses continued to increase in abundance at sites where herbicide applications were not made. The most prevalent weeds noted this week were black medic, common lambsquarters, common ragweed, corn speedwell, dandelion, eastern black nightshade, giant ragweed, ladysthumb smartweed, redroot pigweed, velvetleaf, and various grasses.

VELVETLEAF: Densities of this common summer annual ranged 0-250 plants per m^2 in the fields surveyed as of June 16, and plants averaged <4 inches tall. Velvetleaf grows rapidly and synchronously with corn plants, eventually towering above the corn canopy. Its seeds may persist in the soil for over 20 years. Control measures should be taken now, while plants are still relatively small and can be easily killed by herbicides.

Velvetleaf *Clarissa Hammond DATCP*

FRUITS

CODLING MOTH: Reports indicate that populations of this insect are very high, but non-uniform within orchards. Under such circumstances the value of treating entire orchards is questionable. John Aue of Threshold IPM Services advises growers who observe an irregular pattern of codling moth activity to treat only those blocks with high counts, stipulating that orchards with fairly large numbers of obliquebanded leafrollers, in addition to codling moths, may benefit from a comprehensive spray to reduce populations of both species.

OBLIQUEBANDED LEAFROLLER: With few exceptions, numbers of moths in pheromone traps have been relatively low this season. The highest count reported thus far was 39 moths at Dodgeville from June 13-19. Significant captures of obliquebanded leafrollers indicate when to monitor for larval hatch (7-10 days after counts begin to escalate), and not and the potential for damage.

APPLE SCAB: Primary scab lesions are beginning to appear in orchards where the infection process was not fully inhibited by earlier fungicide applications. Orchard blocks should be monitored for primary scab lesions at this time. If no scab is detected, the fungicide rate can be reduced to ½ of the standard rate.

SPOTTED TENTIFORM LEAFMINER: Pheromone trap counts ranging from 0-245 moths represent the start of the second flight. Peak flight activity is not expected to occur until the first week of July in the southern and central counties and a week or more or later in the east central and northern counties. The economic threshold for second generation spotted tentiform leafminer larvae increases from 0.1 to 1.0 mine per leaf.

WIND & HAIL DAMAGE: Orchardists are reporting that wind damage has been a more serious problem than excessive rains in the last 9-14 days. Significant hail damage occurred at an orchard near Elkhorn in Walworth County during the thunderstorms on June 12.

PHYTOPHTHORA ROOT ROT: Trees submerged in several inches of water or saturated for extended periods of time are at an increased risk for development of this disease. Preventative treatment of young apple trees (<5 years old) with a systemic fungicide is justifiable in orchards that remain flooded, especially those with a history of root rot problems.

NURSERY & LANDSCAPE

EUROPEAN ELM FLEA WEEVIL: Heavy infestations of this pest were noted on elms in Rock County, where numerous leaves showed blotchy leaf mines resulting from larval feeding between the leaf tissues. Emergence of adults is underway, although some pupae are still present on elm leaves. Insecticides are effective against

the adults and should be applied now. Repeated applications may be necessary in areas where emergence extends over the course of several weeks.

Elm flea weevils on elm leaf *Liz Meils DATCP*

LINDEN BORER: Exit holes and sawdust-like frass associated with linden borers were observed on little-leaf linden trees in St. Croix County. Immediate removal and destruction of infested nursery stock is advised to prevent further spread of this wood boring beetle.

FOREST

GYPSY MOTH SPRAY PROGRAM: Aerial applications of Btk conducted as part of the DATCP Slow the Spread Program were completed on June 13. Approximately 29,330 acres were treated at 24 sites in Ashland, Bayfield, Clark, Green, Iowa, Jackson, Monroe, Richland, Rusk and Taylor counties. Last season, Btk treatments totaling 25,229 acres were completed on May 25.

The DNR Suppression Program completed Btk applications in the eastern half of Wisconsin on June 2, with the treatment of 12,069 acres in Adams, Brown, Columbia, Dane, Door, Green Lake, Juneau, Marathon, Marinette, Marquette, Menominee, Milwaukee, Outagamie, Rock, Sauk and Waushara counties. Approximately 494 acres were treated with Gypchek, a viral insecticide specific to gypsy moth larvae. The Slow the Spread Program did not treat any sites with Gypchek this year.

Prior to the start of the gypsy moth flight period in late June or early July, the Slow the Spread Program will apply pheromone flakes to sites in 7 counties, including Ashland, Bayfield, Chippewa, Eau Claire, Jackson, Price and Taylor. Pheromone flakes are non-toxic tiny green particles that carry the scent of the female gypsy moth and disrupt the mating process.

TRAPPING NETWORKS

BLACK LIGHT TRAPS: European corn borer moth flight continued at very low levels for the fourth consecutive week. Counts in black light traps averaged 3.9 moths per trap from June 13-19, which compares to 4.4 moths per trap from June 6-12, 1.9 moths per trap from May 30-June 5, and 0.2 moths per trap from May 22-29. The numbers reported from Mazomanie and Sparta during the previous week and Marshfield this week, while not particularly high, probably reflect peak emergence of the first flight of moths. Adults should continue to appear in traps at low levels for another week or two.

By contrast, a marked increase in true armyworm numbers was noted at several locations, including Janesville – 96 moths, Marshfield – 45 moths, and Arlington – 31 moths. A count of 46 bristly cutworms was registered at Janesville from June 16-18, and the first cabbage looper of the season was captured at Lancaster.

CORN EARWORM: An unusually early flight of migrant corn earworm moths continued in the southern and central areas during the June 12-19 reporting period. High pheromone trap counts of 325 and 175 moths at Lancaster and Sparta are more typical of heavy flights in August, when the main flight is expected to occur in Wisconsin. The Janesville cooperator reported 52 moths for the week and the Manitowoc cooperator reported 23 moths. These numbers indicate that corn, tomatoes, cabbage, soybeans and other suitable hosts should be watched closely for larval feeding.

APPLE INSECT & BLACK LIGHT TRAP COUNTS JUNE 13 - 19

COUNTY	DATE	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	AM RED[5]	AM[6]
Bayfield	6/13-6/19	Apple Hill	*529		*0.3 (max 1)			
Bayfield	6/13-6/19	Bayfield Apple	*17.2		*2.3 (max 13)			
Bayfield	6/13-6/19	Blue Vista	*126		*2.7 (max 7)			
Bayfield	6/13-6/19	Erickson's	*75		*0.9 (max 5)			
Bayfield	6/13-6/19	Hillcrest	*194		0	1		
Bayfield	6/13-6/19	Lobermeier	34	44	0	0		
Bayfield	6/09-6/16	Orienta	22	0	0	0		
Brown	6/13-6/19	Oneida	245	0	18	2		
Chippewa	6/13-619	Chippewa Falls	8	0	9.7	0.25		
Crawford	6/13-6/19	Gays Mills	24	0	74	0		
Dane	6/05-6/17	Deerfield	190	0	29	31		
Dane	6/13-6/19	Stoughton	20	0	7.5	15		
Dane	6/13-6/18	West Madison	0	0	9	17		
Dodge	6/13-6/19	Brownsville	0	2	6	2		
Fond du Lac	6/13-6/19	Campbellsport 1	0	0	0	0		
Fond du Lac	6/13-6/19	Campbellsport 2	0	0	0	0		
Fond du Lac	6/13-6/19	Malone	20	0	2	2.5		
Grant	6/13-6/19	Sinsinawa	81	16	13	0		
Green	6/13-6/19	Brodhead	2	0	1	5		
Iowa	6/13-6/19	Dodgeville	130	0	110	39		
Iowa	6/13-6/19	Mineral Point	1	0	0	1		
Jackson	6/13-6/19	Hixton	22	1	1	5		
Marquette	6/13-6/18	Montello	240	2	12	0		
Marinette	6/13-6/19	Niagara	24	0	13	0		
Ozaukee	6/11-6/18	Mequon	0	0	9.6	13.5		
Pierce	6/13-6/19	Beldenville	4	1	1	0		
Pierce	6/12-6/19	Spring Valley	2	3	3.5	0		
Racine	6/13-6/19	Rochester	5	0	2.36	10		
Racine	6/13-6/19	Raymond	165	0	15	12.5		
Richland	6/12-6/18	Hill Point	9	0	13	30		
Sheboygan	6/13-6/19	Plymouth	20	0	17	8		
Waukesha	6/13-6/19	New Berlin	69	0	31	11		

[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; *Counts were averaged.

COUNTY	DATE	SITE	ECB[1]	TA[2]	BCW[3]	SCW[4]	DCW[5]	CE[6]	CEL[7]	ALFL[8]	FORL[9]	VCW[10]
Chippewa	6/11-6/18	Chipp. Falls	0	1	0	0	0	0	0	0	0	0
Columbia	6/12-6/18	Arlington	9	31	1	0	0	0	17	0	4	0
Dane	6/12-6/19	Mazomanie	10	7	0	0	0	0	0	0	0	0
Grant	6/11-6/19	Lancaster	3	3	0	0	0	1	0	0	2	0
Manitowoc	6/12-6/19	Manitowoc	2	9	0	0	0	0	1	0	0	0
Marathon	6/12-6/19	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	6/12-6/19	Sparta	3	2	0	6	0	4	0	1	0	0
Rock	6/12-6-18	Janesville	1	96	0	0	0	0	11	0	3	0
Walworth	6/12-6/19	East Troy	0	0	0	0	0	0	0	0	0	0
Wood	6/12-6/19	Marshfield	7	45	3	2	0	0	6	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]Alfalfa looper; [9]Forage looper; [10]Variegated cutworm.