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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

Comparatively low temperatures continued during the second week of June. Light frost injury to soybeans and corn was reported in the north, while very cool nights slowed crop development and kept insect activity at minimal levels. Several days of dry weather allowed full-scale fieldwork, with emphasis on the harvest of the last acres of first growth alfalfa in the south. Favorable drying conditions have resulted in a remarkably fast alfalfa harvest this spring. Yields are reported as below average, but quality generally is very high. Although insect activity was suppressed by cool nights early in the week, warmer weather later on caused a surge of activity, including the capture of 695 true armyworm moths in the black light trap near Janesville. Populations of some economic pests are at a point where serious problems could develop fast if Wisconsin experiences a period of hot weather.

LOOKING AHEAD

TRUE ARMYWORM: Light injury to corn has become evident in the southern counties. Larvae are as numerous as 14 per 100 plants in a few fields but most contain only 1 or 2 per 100 plants. In the Cross Plains area of Dane County, larvae ¾ inch in length were observed. Damage thus far is very light and confined to the peripheral rows, but is expected to become more visible as the larvae mature and increase in size. Growers of corn, oats and peas should be aware of the possibility of outbreaks in localized fields throughout the state later this month.

EASTERN TENT CATERPILLAR: Many tents are now vacant and pupation has begun in southern and central Wisconsin. Complete defoliation of individual roadside trees is apparent statewide, but in the central counties in particular. The emergence of adults is anticipated by June 22, once 750 degree days have been reached in the southern areas of the state.

EUROPEAN CORN BORER: The most advanced corn is now susceptible to infestation by 1st generation corn borers. Examination of the tallest fields in Dane, Columbia and Rock counties revealed about 1 egg mass per 100 plants. Leaf feeding by 1st instar larvae should be detectable in advanced corn fields in the week ahead.

POTATO LEAFHOPPER: Numbers are increasing in second growth alfalfa and vegetable crops. Counts in 8-10 inch regrowth in the southern districts ranged from 0.3-0.9 per sweep, which compares to 0-0.5 per sweep in the previous week. Although circumstances have not justified treatment in any alfalfa field surveyed thus far, numbers are approaching the economic threshold of 1.0 per sweep in 6-12 inch alfalfa and 2.0 per sweep in

alfalfa taller than 12 inches. Development and reproduction are expected to accelerate with warmer temperatures predicted for next week. Nymphs could not be found in fields checked in Columbia, Dane and Dodge counties.

FORAGES

ALFALFA WEEVIL: Larval numbers in the southern third of the state have decreased significantly due to pupation and the harvest of a high percentage of the alfalfa crop. Representative counts in regrowth alfalfa in Columbia, Dane, and Sauk counties vary from 0.1-1.2 per sweep. By contrast, infestations continue in unharvested fields in the east-central and northern areas where feeding injury exceeds 80% in some instances and as many as 5 mature larvae per sweep have been collected. The degree of damage suffered by the first crop was light in most cases, with only a few fields showing moderate to heavy leaf tip feeding.

PEA APHID: High populations persist in alfalfa. Adults and nymphs were swept from regrowth at the rate of 2-47 per sweep and from unharvested fields at the rate of 8-51 per sweep. Populations also have shown a minor increase in peas in the south-central area. Should this trend continue, some treatment of peas may be needed.

Pea aphid *Krista Hamilton DATCP*

PLANT BUGS: Mixed populations of the tarnished plant bug and alfalfa plant bug in regrowth alfalfa range from 0.1-3.5 per sweep, with an average of 0.9 per sweep. This is well below the economic threshold of 5 per sweep. Nymphs of both species are entering the last instar and some have reached maturity.

DEGREE DAYS JANUARY 1 - JUNE 11

LOCATION	50°F	2008	NORM	48°F	40°F
Dubuque, IA	618	638	—	649	1232
Lone Rock	588	583	—	603	1161
Beloit	623	665	—	654	1237
Madison	563	567	717	593	1137
Sullivan	599	626	710	626	1189
Juneau	554	586	—	581	1117
Waukesha	560	552	—	590	1136
Hartford	529	535	—	559	1086
Racine	486	480	—	517	1034
Milwaukee	482	470	564	511	1024
Appleton	440	499	614	449	938
Green Bay	377	442	587	390	850
Big Flats	513	526	—	513	1025
Hancock	505	528	722	492	1002
Port Edwards	476	493	669	479	971
La Crosse	567	560	776	559	1140
Eau Claire	526	486	686	529	1066
Cumberland	463	405	646	420	921
Bayfield	294	271	452	257	642
Wausau	393	435	606	386	839
Medford	417	400	537	397	874
Crivitz	350	399	—	341	781
Crandon	334	374	516	301	718

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

CORN

EUROPEAN CORN BORER: The peak in moth activity should occur before June 21 in the southern counties and June 30 in the central counties. Based on the record low population of larvae documented during the abundance survey last fall (the third lowest population since surveys began in 1942), it seems probable that the first flight of corn borers will be extremely light. No larval feeding has been observed yet.

STALK BORER: Minor feeding injury has become visible in corn fields in the southwest, south-central, and west-central districts. In Columbia, Dane, Dodge, Iowa, Juneau, Monroe, Sauk and Vernon counties, early instar larvae (¼ inch) were common but not abundant on corn plants in the marginal 2-3 rows of fields. Numbers of affected plants were well below economically significant levels in all areas checked. The larvae of this insect

complete 7-10 instars and feed for a period of 8-10 weeks.

Leaf feeding caused by stalk borer *Krista Hamilton DATCP*

TRUE ARMYWORM: Larval populations are increasing in corn and alfalfa. Surveys conducted in Columbia, Dane, Juneau and Monroe counties found light leaf feeding on 1-14% of the plants in the marginal rows of corn fields, while low numbers of ¾ inch larvae were swept from scattered alfalfa fields. A strong potential exists for heavy populations to develop in lodged oats, grassy pea fields, and grassy corn fields in particular. As post-emergence herbicides begin killing the grasses in some of the late-planted weedy corn fields, armyworm larvae may concentrate on the corn plants in numbers sufficient to cause significant damage.

Leaf feeding caused by true armyworm *Krista Hamilton DATCP*

SMALL GRAINS

WHEAT DISEASES: A wheat disease survey of 17 fields in Columbia, Dane, Dodge, Fond du Lac, Racine, Walworth and Winnebago counties showed very few symptoms during the first week in June. Most of the surveyed fields were at the heading stage (Feekes 10.1-10.5). At these growth stages, the flag leaf and 2 leaves below were sampled to assess the incidence and severity of the major yield-reducing foliar diseases. Levels of powdery mildew, septoria leaf blotch, and leaf rust (1 pustule in 1 field) were all incidental and below established thresholds. Loose smut was present at trace levels in only 2 fields. Fourteen of the 17 fields contained a few plants with reddish-purple discolored leaf margins, possibly symptoms of barley yellow dwarf virus or aster yellows. Growers should remain watchful for disease development in areas where wet conditions persist.

SOYBEANS

BEAN LEAF BEETLE: The annual survey of 152 first growth alfalfa fields conducted from May 18-June 10 yielded just 24 overwintered adults. This figure is comparable to the 21 beetles collected at the same time last season, but is considerably lower than the numbers found during annual surveys in the years 2003-2007. Beetles were swept from 14 fields in Columbia, Fond du Lac, Grant, Jefferson, Lafayette, Rock, Trempealeau, Waukesha, Waushara and Washington counties, with no apparent pattern to their distribution. Survey results indicate that winter mortality due to severe temperatures was high. Following are the numbers of beetles collected during surveys in the previous 6 years: 2008 (21 beetles), 2007 (509 beetles), 2006 (171 beetles), 2005 (180 beetles), 2004 (180 beetles), and 2003 (101 beetles).

SOYBEAN APHID: No aphids were detected in any of the VE-V1 soybean fields surveyed in Dane, Columbia, Grant and Juneau counties as of June 12. The migration of aphids from buckthorn to emerging soybeans typically occurs by early to mid-June in Wisconsin.

FRUITS

CODLING MOTH: The first moths were captured in southern Wisconsin from May 15-21, and activity has been sporadic since then. Some apple orchards have registered as many as 59 moths per trap per week, while others have observed no moths at all. Although activity in the previous two weeks was suppressed by nightly temperatures below 60°F, degree day accumulations are adequate for the peak of the first flight to have occurred

in southern orchards and in advanced west-central areas of the state.

PLUM CURCULIO: Adult emergence and migration into orchards continued for the third week with the capture of 7 weevils reported from Mineral Point. Feeding and oviposition by this pest generally extends for a period of six weeks, but this interval may be prolonged due to the low temperatures experienced in this month. Pyramid traps should be maintained through early July.

SPOTTED TENTIFORM LEAFMINER: Pheromone trap counts ranging from 1-50 moths represent the start of the second flight in the southeast. The peak of this flight of moths 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 sapfeeder larvae increases from 0.1 to 1.0 mine per leaf.

WEEDS

CANADA THISTLE: Plants have begun to bloom in southern Dane County. This designated noxious weed spreads both by wind blown seeds and a creeping perennial root system, making it one of the most persistent thistles in Wisconsin pastures. Maintaining a vigorous pasture system by preventing overgrazing is an important preemptive measure. A combination of control methods such as repeated mowing or tillage and herbicide use must be implemented now, prior to seed formation, to achieve full control.

Canada thistle *Clarissa Hammond DATCP*

WILD PARSNIP: The yellow umbellate flowers of this invasive and toxic plant are appearing along roadsides in the southern and central districts. Wild parsnip typically inhabits field edges, pastures, roadsides or open areas. This plant is the cause of skin phytophotodermatitis (i.e. severe blisters or burns) when the sap contacts skin and is exposed to sunlight.

Wild parsnip *Krista Hamilton DATCP*

CORN WEEDS SURVEY: The annual survey of weeds in corn continued this week in Columbia, Dane, Dodge, Grant, Iowa, Jefferson, Fond du Lac, Outagamie, Sheboygan, Washington and Winnebago counties. Fourteen of the 42 sites examined at 3-day intervals since June 2 were treated with a post-emergence herbicide, and thus were removed from the sample set. The following paragraphs summarize the preliminary results of surveys conducted from June 5-12:

COMMON LAMBSQUARTERS: Plant heights increased significantly in the past week, from an average of 2 inches from June 1-4 to an average of 4-6 inches from June 5-12. This species has been the most prevalent broadleaf weed observed in the corn fields inspected this spring. At present densities, common lambsquarters may be causing yield loss in roughly 45% of surveyed fields.

VELVETLEAF: Most (69%) of the sites examined contained low to moderate densities of 1-10 plants per sq. meter. Heights ranged from 2-6 inches and averaged 3 inches, with the tallest plants noted in Dane, Grant, Iowa and Sheboygan counties.

GRASSES: Grasses were observed at densities of 11-50 or more plants per sq. meter at 38% of sites, and averaged 4 inches tall. An exceptionally weedy field in Columbia County contained an average of 101-500 small plants per sq. meter. Yield losses due to competition

from grasses are occurring in some untreated fields.

GIANT RAGWEED: This weed has shown little change in emergence relative to last week. Surveys found lower densities than expected, ranging from 0-5 plants per sq. meter in 12% of fields examined. The tallest plants were 14-16 inches in fields in Columbia and Dane counties.

COMMON RAGWEED: Seedlings averaging 2-4 inches in height were noted in fields in Columbia, Grant, Iowa, Jefferson and Sheboygan counties, but were most prevalent at sites in the east-central area. Densities were low to moderate and ranged 1-10 plants per sq. meter. In general, very little yield loss can be attributed to this weed at a majority of locations.

NURSERY & LANDSCAPE

EUROPEAN ELM FLEA WEEVIL: Heavy infestations of this pest were noted on several elm varieties in Fond du Lac County. Damaged foliage showed the characteristic blotchy leaf mines resulting from larval feeding between the leaf tissues. Pupation is likely to occur in the next week, with the first appearance of adult weevils expected by early July. Insecticides are effective against the adults and should be applied at emergence. Repeated applications may be necessary if emergence extends over a period of several weeks.

European elm weevil damage *Liz Meils DATCP*

TWO-SPOTTED SPIDER MITE: Maples in a Fond du Lac County nursery were showing severe infestations of two-spotted spider mites. Affected leaves initially have a speckled or stippled appearance, later having a reddish cast, with eventual desiccation occurring. Control options include dormant horticultural spray oils, registered miticides, introducing predacious mites, and dislodging mites with a forceful spray of water. Populations should be monitored closely prior to applying chemical treatments. Repeat applications may be needed if heavy populations persist.

MEADOW SPITTLEBUG: Spittle masses were evident on an assortment of nursery stock in Dane, Fond du Lac, Kewaunee and Sawyer counties. The nymphs inside are nearly full grown and will mature into adults in the next two weeks. Populations of this insect seldom build to damaging levels in Wisconsin, and no control is needed.

Spittle mass on hackberry *Liz Meils DATCP*

EUROPEAN ELM SCALE: Inspections in the past week found heavy scale infestations on Pioneer elms. In the spring, females produce white, felted fibers that circle their dark-brown, oval bodies. Egg deposition begins by late June, and the bright yellow crawlers hatch in a matter of hours. The optimum time to treat scales is after egg hatch in late June or early July, when the new crawlers are active. Horticultural oils, soaps, insect growth regulators and conventional insecticides can provide adequate control.

CRANBERRIES

CRANBERRY REPORT: Below normal temperatures continued to slow cranberry development in the past week. Degree day accumulations (base 50°F) in the central bogs are approximately 23% behind normal levels for early June, while development in the northern cranberry sites is about 10-14 days later than in the central beds. Crop scouts and growers report slow but

consistent plant growth. The average height of new growth varies from ½-1 inch at mid-bed and is slightly more advanced at the edges. Flower bud development continues on pace, with most beds currently in the roughneck to bud development stages. Of some concern to growers is the appearance of more "red color" than usual, but this is likely mild stress brought on by the cool weather patterns. Growers anticipate bloom and the delivery of honeybees in the next week.

CRANBERRY TIPWORM: The maggot-like larvae of this insect are feeding on developing leaves and causing a "cupping" of the tips of cranberry uprights. Varieties most susceptible to tipworm damage are 'Ben Lear', 'McFarlin', 'Natives', 'Pilgrim' and 'Searles'.

COPTODISCA LEAFMINER: Damage began appearing on cranberries last week in Jackson and Wood counties. The pattern of feeding by the cranberry leafminer causes a very distinct hole to develop in the leaf. Affected foliage usually turns brown and falls from the vine. The adult moth emerges around July 4.

WHITE GRUB: Trap counts at locations in Juneau and Wood counties increased for the fourth successive week, but generally remain low. Averages for the period of May 30-June 5 varied from 31-47 beetles per trap, which represents an increase from 18-21 beetles collected during the previous week.

FOREST

GYPSY MOTH SPRAY PROGRAM: The DATCP Slow the Spread Program completed all aerial Btk applications for the year on June 5. A total of 44,990 acres (including multiple treatments) were treated in the following counties: Bayfield, Chippewa, Clark, Crawford, Eau Claire, Grant, Green, Iowa, Jackson, La Crosse, Monroe, Rusk and Vernon. Mating disruption treatments are expected to start at the end of June or early July in southern Wisconsin. Approximately 121,930 additional acres will receive treatments in the following counties: Bayfield, Chippewa, Clark, Dunn, Eau Claire, La Crosse, Rusk, Trempealeau, Vernon and Washburn.

GYPSY MOTH TRAPPING PROGRAM: Seasonal trappers have set 15,810 traps as of June 10, more than half of the total traps scheduled to be set by early July. The installation of traps has been completed in Adams, Green, Juneau, Rock and Wood counties. Moths should begin to appear in traps in the next 3-4 weeks.

EMERALD ASH BORER: The emergence of this beetle was noted on June 4 near Victory in Vernon County. One specimen was captured on one of 657 purple panel traps deployed in the area. This event corresponds with the EAB phenology model, which predicts the start of the adult flight period at 450 degree days (50°F). Further, it represents the first documented emergence date for EAB in Wisconsin.

Emerald ash borer purple panel trap *Krista Hamilton DATCP*

TRAPPING NETWORKS

BLACK LIGHT TRAPS: An unusually high capture of 695 true armyworm moths was registered at Janesville from June 4-10. The surge in activity corresponded to the cutting of nearby grasses. This report indicates that there currently are a high number of adults capable of depositing eggs on grasses in susceptible crops.

European corn borer adults are appearing regularly in black light traps, although counts have been low on nights cooler than 55°F. A few egg masses were detected on the undersides of corn leaves on June 11 in Dane County. The moth flight may be prolonged because of the low temperatures experienced this month.

STRIPED CUCUMBER BEETLE: Yellow sticky traps have been deployed at 4 sites to monitor the emergence of this pest. Very little evidence of movement into fields has been noted, with the exception of one specimen captured on a trap on June 11. This beetle is the vector of bacterial wilt of cucurbits such as cucumbers, melons and squash.

APPLE INSECT & BLACK LIGHT TRAP COUNTS JUNE 5 - 11

COUNTY	DATE	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	OBLR[5]	AM RED[6]	AM YELLOW[7]
Bayfield	6/05-6/11	Keystone	20	6	0	1			
Bayfield	6/05-6/11	Bayfield Apple	0	—	5	—			
Bayfield	6/01-6/08	Orienta	37	0	0	—			
Brown	6/05-6/11	Oneida	6	0	1	0			
Chippewa	6/05-6/09	Chippewa Falls 1	10	1	7	1	0		
Chippewa	6/05-6/11	Chippewa Falls 2	62	19	20				
Crawford	6/05-6/11	Gays Mills	2	2	14	1	0		
Dane	6/04-6/11	Deerfield	3	0	8	4			
Dane	6/05-6/11	McFarland	0	0	20	5			
Dane	6/05-6/11	Stoughton	2	1	5	0	1		
Dane	6/05-6/11	West Madison	3	0	10	2			
Dodge	6/05-6/11	Brownsville	0	2	0	0			
Fond du Lac	6/05-6/11	Campbellsport	7	0	0	0			
Fond du Lac	6/05-6/11	Malone	17	0	4	0			
Grant	6/05-6/11	Sinsinawa	31	7	1	4			
Green	6/05-6/11	Brodhead	2	0	0	21			
Iowa	6/05-6/11	Dodgeville	48	1	57	12	3		
Iowa	6/05-6/11	Mineral Point	0	1	0	1		7 PC	
Jackson	6/05-6/11	Hixton	8	0	1	0	1		
Kenosha	6/05-6/11	Burlington	50	0	3	0	0	0 PC	
Marinette	6/05-6/11	Niagara	39	2	0	0			
Marquette	6/05-6/11	Montello	12	2	0	0		0 PC	
Ozaukee	6/05-6/11	Mequon	10	0	12	0			
Pierce	6/05-6/11	Beldenville	20	10	1	0			
Pierce	6/04-6/11	Spring Valley	12	2	1	0	0	0 PC	
Racine	6/05-6/11	Rochester	0	1	7	0			
Richland	6/03-6/09	Hillpoint	10	0	15	1			
Richland	6/05-6/11	Richland Center	5	0	20	1	0		
Sauk	6/05-6/11	Baraboo	11	0	4	0	0		
Sheboygan	6/05-6/11	Plymouth	5	0	1	0			
Walworth	6/05-6/11	East Troy	0	1	1	0			
Walworth	6/05-6/11	Elkhorn	1	3	1	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	6/04-6/10	Chipp Falls	0	0	0	0	1	0	2	0	0	0
Columbia	6/04-6/11	Arlington	1	8	0	1	0	0	0	0	0	1
Dane	6/05-6/10	Mazomanie	4	0	0	2	0	0	0	0	0	0
Grant	6/05-6/11	Lancaster	0	2	0	5	0	0	0	0	0	0
Manitowoc	6/05-6/11	Manitowoc	0	33	0	8	0	0	0	0	7	0
Marathon	6/04-6/11	Wausau	0	1	1	3	0	0	0	0	1	0
Monroe	6/05-6/11	Sparta	4	0	0	6	5	2	0	0	2	0
Rock	6/04-6/10	Janesville	2	695	0	1	0	0	4	0	0	0
Walworth	6/05-6/11	East Troy	3	3	1	1	0	0	0	0	0	0
Wood	6/04-6/11	Marshfield	1	19	0	3	0	0	1	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.