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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

Mild, windy and intermittently wet weather prevailed during the first week of May. Scattered rainfall brought varying amounts of precipitation to the state, and the response by lawn grasses and alfalfa was immediate. Soil moisture levels are now reported as adequate or surplus for 91% of Wisconsin croplands. The growing season is analogous to last year when a comparison is made of degree days, although conditions this spring have been considerably more favorable for fieldwork, as evidenced by the relatively high acreage of corn, oats and potatoes planted since late April. Predictably, development and activity of resident insects accelerated with the warmer temperatures in the past week. The weather was also suitable for migrating pests such as aphids, leafhoppers and black cutworm moths, which are appearing in higher numbers in the southern counties.

LOOKING AHEAD

BLACK CUTWORM: Female moths have begun to deposit eggs on grass blades and winter annuals in low-lying fields with poor drainage, reduced tillage fields, and fields with an abundance of grassy weeds. Growers with such field conditions are advised to begin closely monitoring seedling corn by May 21 for small pinholes in the leaves and other indicators of cutworm feeding.

ALFALFA WEEVIL: Adult emergence has increased and spring egg deposition is underway in advanced areas. Alfalfa fields, especially in the southern part of the state, should start showing evidence of this insect (e.g. small larvae and tip feeding) by May 12.

PLUM CURCULIO: Spring migration into orchards from nearby woods or fence rows may begin in the next week if mean daytime temperatures continue to exceed 60°F. Pyramid traps used to monitor plum curculio activity should be placed immediately and checked twice weekly during the 6-week emergence period.

EUROPEAN CORN BORER: Pupation is likely to begin over the weekend in the southern and west-central districts, with the first moths of the season appearing in black light traps by May 18. A very light spring flight is anticipated based on results of the 2008 fall larval abundance survey, which documented the third lowest population in recorded history of corn borer surveys in Wisconsin (0.09 borer per plant).

POTATO LEAFHOPPER: The major influx of leafhoppers from source populations in the south-central U.S. can be expected in the next 1-2 weeks. Examination of historical issues of the Wisconsin Pest Bulletin since 1956 showed this annual event has occurred as early as April 15 in 1981 to as late as June 7 in 1996.

BEAN LEAF BEETLE: The emergence of adults from overwintering sites is probable in the week ahead. Generally the first beetles are swept from first growth alfalfa fields by early to mid-May.

FORAGES

ALFALFA WEEVIL: Adults have become increasingly noticeable in alfalfa in the last week. Surveyed fields in the southwest counties showed 2-3 per 50 sweeps, while in west-central counties the population was 1 per 50 sweeps. A single early instar larva was collected on May 4 in Iowa County. Close inspection of alfalfa fields for small larvae should begin at 300 degree days (sine base 48°F), or by May 12 for growers in the southern and west-central areas. Alfalfa weevil degree day accumulations through May 7 were as follows: Beloit 229, Eau Claire 191, La Crosse 202, Madison 200, Milwaukee 175, and Wausau 138.

Alfalfa weevil *Krista Hamilton DATCP*

CLOVER LEAF WEEVIL: Larvae are present in scattered alfalfa fields, especially those fields containing some clover. Populations are low and seldom exceed 2 per 50 sweeps. These pale green grubs should not be mistaken for alfalfa weevil larvae, which are smaller and have a shiny black head capsule.

PEA APHID: Numbers are increasing in first growth alfalfa. Counts vary from 5-12 per 50 sweeps, and small nymphs have become more abundant in many fields. Where populations appear to be highest (Adams, Iowa and Sauk counties), the number of predators such as ladybeetles, damsel bugs and green lacewings is also proportionately higher.

DEGREE DAYS JANUARY 1 - MAY 7

LOCATION	50°F	2008	NORM	48°F	40°F
Dubuque, IA	232	199	—	222	536
Lone Rock	229	184	—	211	505
Beloit	242	231	—	229	545
Madison	213	181	257	200	477
Sullivan	228	218	240	214	511
Juneau	207	196	—	196	468
Waukesha	209	185	—	200	481
Hartford	197	175	—	189	453
Racine	186	156	—	178	430
Milwaukee	181	149	183	175	424
Appleton	166	141	189	156	378
Green Bay	141	116	182	134	341
Big Flats	202	161	—	181	435
Hancock	194	162	250	171	413
Port Edwards	186	151	230	170	405
La Crosse	224	164	274	202	492
Eau Claire	206	142	230	191	453
Cumberland	184	121	201	161	404
Bayfield	99	59	127	85	258
Wausau	150	128	189	138	345
Medford	163	112	158	148	368
Crivitz	136	103	—	124	321
Crandon	125	98	160	109	293

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

TARNISHED PLANT BUG: Adults averaged 3-13 per 50 sweeps in southwest and central Wisconsin. This represents a minor increase over last week. Mating is underway and the first nymphs should become evident in the next 1-2 weeks.

ALFALFA PLANT BUG: Nymphs have begun to appear in alfalfa in low numbers, averaging from 1-4 per 50 sweeps in Iowa, Richland and Sauk counties.

CORN

ARMYWORM: Captures of moths in black light traps have been extremely light so far. The first adults were reported in the trap at Janesville on the evening of April 13, which was a few days earlier than in the previous year. The principal factor influencing true armyworm counts in spring is the frequency of southerly wind events that carry migrants into the state.

BLACK CUTWORM: Significant flights of 9-19 moths were again registered at the Barneveld, Dodgeville and Spring Green trap sites from April 30-May 3, and near Arena and Belmont on the nights of May 3-6. Pheromone traps distributed in Dane, Fond du Lac, Grant, Iowa, Lafayette, Monroe, Richland, Rock and Sauk counties captured a total of 175 moths during the last reporting period, with an average of 8 per trap. Recent surges in flight activity suggest that oviposition by female moths is intensifying.

Projected cutting dates have been established for the southern districts based on the first concentrated captures on April 24, and are as follows: southwest May 29-June 1, south-central May 28-June 4, west-central May 31-June 2. These intervals represent the earliest start of the period when corn will be susceptible to damage by 4th instar larvae, and not the potential for outbreaks. Scouting should begin one week in advance of predicted first cutting dates and continue until the five-leaf stage (V5).

Corn seedling severed by black cutworm www.pioneer.com

SOYBEANS

BEAN LEAF BEETLE: Less than half of the beetles that entered the 2008-09 winter are likely to emerge this spring, according to a University of Minnesota prediction model. Mortality estimates based upon winter temperature data range from 45% in the southeast to 82% in the far northwest, with a mean of 61% mortality for the 18 Wisconsin counties assessed. These figures indicate high mortality among the overwintered generation of beetles and a low risk of defoliation for most early soybeans this spring. A survey to assess the distribution and abundance of overwintered beetles is planned for this month.

Bean leaf beetle Krista Hamilton DATCP

SMALL GRAINS

ENGLISH GRAIN APHID: Counts of adults in winter wheat remained low during the last week, varying from 1-4 per 50 sweeps in the southern districts. None were collected by sweeping grains in Adams, Marquette and Waushara counties.

BIRD OAT-CHERRY APHID: This dark olive-green aphid, the principal vector of barley yellow dwarf virus, was found at the rate of 1-3 per 50 sweeps in Adams, Dane, Iowa, Marquette, Richland and Sauk counties. Both winged and non-winged forms were noted.

ASTER LEAFHOPPER: Surveyed fields contained very low numbers of adults, 2 per 50 sweeps or less. This insect is of primary concern to carrot, celery and lettuce growers due to its capacity to transmit the mycoplasma-like pathogen, aster yellows. Infectivity rates among the migrating population this spring have not been established.

FRUITS

REDBANDED LEAFROLLER: Large flights of moths were registered in the last week at 7 of 23 reporting orchards, from Racine County in the southeast to Chippewa County in the northwest. This corresponds with the phenology model for this species, which predicts peak emergence of first brood adults at 106-160 degree days (base 50°F).

First generation larvae are active in orchards in the southern and central areas.

OBLIQUEBANDED LEAFROLLER: Now is an opportune time to scout for overwintered larvae in terminals and to apply a Bt or conventional product if their numbers warrant control. Sprays are most effective while the larvae are still small and actively feeding. Scouting is advised for orchards in Brown, Dane, Fond du Lac, Iowa, Racine, Richland and Walworth counties, where very high trap counts were registered last fall.

Obliquebanded leafroller moth Derrick Ditchburn www.dereila.ca

NATIVE POLLINATORS: Apple growers are urged to forego spray applications at the pink stage of development in order to reduce insecticide impacts on native pollinators now present in most orchards.

APPLE SCAB: A high frequency of rainy days this spring has favored the development and spread of this disease. Orchardists in the southern counties report that very wet conditions resulted in 2-4 scab infection periods by May 4. Growers in the drier northern areas of the state report 1-2 infection periods. It is important that spray schedules be maintained.

CODLING MOTH: Pheromone traps should be in place to capture the first spring moths expected to emerge in orchards once 201 degree days (base 50°F) are surpassed. This includes the southern and central counties. Daily traps checks should be performed after the moths appear and until the 'biofix' is established.

SPOTTED TENTIFORM LEAFMINER: Peak flights have been documented at several apple orchards in the past week. Trap counts are expected to decline in the southern areas as populations transition into the larval stages. The optimal sampling period for orchards that recently registered peak moth counts begins around May 17-21. Scouting regimens should include checking 10 terminals and fruit spurs per tree on 2-3 trees in each orchard block to determine the average number of sapfeeder leafmines per leaf. Counts of 1 mine per 10 leaves indicate that populations are high and may increase to economic levels by the second generation.

CRANBERRY REPORT: Marsh activity accelerated with the warmer temperatures in the past week. The last remnants of frost have dissipated from beds and irrigation equipment has been reinstalled. Pre-emergent weed control is underway, but most fertilizer applications are being deferred until plants break dormancy and new growth begins. With fertilizer prices significantly higher this spring, many growers are reexamining their nutrient management efforts to keep fertilizer costs constant. Water inventories, for the most part, appear sufficient at the onset of the growing season.

WEEDS

WINTER ANNUALS & PERENNIALS: Several species of winter annual and perennial weeds, namely carpetweed, common chickweed, dandelion, field pennycress, shepherd's purse and yellow rocket, are flowering in alfalfa and no-till fields in the southern and central counties. Fields with an abundance of these weeds provide ideal sites for egg deposition by female black cutworm moths.

Yellow rocket Clarissa Hammond DATCP

CRITICAL PERIOD OF WEED CONTROL: Corn and soybean growers should be aware of the critical period of weed control in the first 4-6 weeks following emergence. Field crops are highly sensitive to competition for water and nutrients during this interval and can suffer serious yield loss if weeds are not effectively managed. It is important for fields to be kept as weed free as possible until this designated critical period has passed.

COMMON RAGWEED: Seedlings measuring less than ½ inch in height were noted in Fond du Lac County on May 6. Plants at these early stages of development are still relatively easy to control using standard weed management techniques.

Common ragweed *Clarissa Hammond DATCP*

COMMON LAMBSQUARTERS: Most of the seedlings encountered in fields in Iowa and Lafayette counties were less than 1 inch tall, while those observed in Fond du Lac County were only about ½ inch tall. Densities were low to moderate for now, but this is likely to change as soil disturbances such as tillage and planting continue to trigger seed germination over the next few weeks.

VELVETLEAF: Velvetleaf seedlings have begun to emerge in the southern third of the state. Densities of fewer than 5 plants per m^2 were noted in most areas, although an exceptional field in Fond du Lac County contained more than 50 per m^2. Early-season control is advised, since plants left to mature produce exceptionally hardy seeds that can persist in the soil for up to 50 years.

CREEPING CHARLIE: Plants are in full bloom in the southern half of the state, and in areas where 200 degree days (base 50°F) were surpassed this week. Now is an optimal time to rake, weed or treat creeping Charlie with an herbicide. Manual weeding is an effective control measure for small infestations, as long as the entire horizontal stems are removed.

CRABGRASS: Four years of data collected at the Arlington Research Station show average first emergence dates of May 14 and 15 for large and smooth crabgrass, respectively. At current temperatures, this weed may appear in lawns as early as next week. Pre-emergence herbicides (conventional or organic) applied before seeds germinate should provide adequate control.

NURSERY & LANDSCAPE

BLACK SPOT: Inspectors observed this common fungal disease affecting rose cultivars in a Dane County nursery. The initial symptoms appear as small, round black spots on the leaf surface which later enlarge and cause leaves to turn yellow and fall prematurely. Because wet, humid conditions favor its spread, this disorder can be alleviated by increasing air circulation to keep leaf surfaces dry and removing infected leaves and debris.

ROSE MOSAIC VIRUS: The tea rose varieties 'Ambassador' and 'Chrysler Imperial' at greenhouses in the southwestern counties were found to be infected with this virus. Diagnostic characteristics vary by cultivar, and may include yellow vein banding, ringspots, leaf distortion, poor winter hardiness or reduced vigor. All forms of rose mosaic virus are transmitted by vegetative propagation. Symptomatic plants were removed from sale and destroyed.

Rose mosaic virus *Liz Meils DATCP*

APHIDS: Light infestations were observed on assorted roses and sedums at retailers in Lafayette and Grant counties. These insects may cause direct damage to their nursery stock hosts when densities are high, but aphids are usually only an aesthetic problem. Of larger concern is the secondary growth of sooty mold which results from their honeydew production. Control is seldom needed as there are many natural enemies that regulate populations.

HOSTA VIRUS X (HVX): Nursery inspectors continue to encounter hostas with mottled, crinkled, deformed or abnormally streaked leaves indicative of HVX. Since late April, this virus has been found on the cultivars 'August Moon', 'Gold Standard', 'Krossa Regal', 'Royal Standard', 'So Sweet' and 'Sum and Substance'. Hostas expressing the symptoms listed should be returned to the supplier or destroyed.

FOREST

EMERALD ASH BORER: The Emerald Ash Borer (EAB) Program is conducting its second annual trapping survey to detect new infestations of EAB in the state and to delimit areas in Ozaukee, Vernon and Washington counties in which infestations are already known to occur. Thirty-five field personnel will begin deploying 8,084 purple panel traps at a density of 1 trap per 1.5 sq. miles or 9 per 1.5 sq. miles in the delimitation areas during the week of May 11. Traps will be checked for beetles periodically during the summer months and removed by early fall. The EAB flight period, which extends for about 3-6 weeks, is expected to begin in Wisconsin around 450-500 degree days (base 50°F).

EAB purple panel trap *Mick Skwarok DATCP*

EASTERN TENT CATERPILLAR: Tents have become increasingly conspicuous along roadways in the southern and central areas, and larvae are mostly in the 2nd instar (¾ inch). Very high numbers of tents were observed this week in Adams, Marquette and Waushara counties. Defoliation was light, as foliage on wild cherry, apple and other hosts has not fully expanded. Removal and destruction of the webs and larvae in the immediate future is recommended.

GYPSY MOTH: Egg masses were noted to have hatched in Washington and Columbia counties on May 4 and May 6, respectively. Emergence of larvae is more advanced in Dane and Rock counties relative to other areas. Aerial applications for gypsy moth control are tentatively scheduled to start in Wisconsin by May 15.

GYPSY MOTH TRAPPING PROGRAM: Deployment of pheromone traps is scheduled to begin by May 12 in the southwestern areas of the state. Most of the 29,000 traps placed along roadways this season will be set at a density of 1 per sq. mile, with the exception of 118 delimitation sites in the western counties. These areas will be trapped at a higher density of 4 per sq. mile in order to evaluate the effectiveness of previous treatments or to delineate the boundaries of a potential infestation. Male gypsy moths trap counts will be used to determine potential treatment sites for 2010.

TRAPPING NETWORKS

BLACK LIGHT TRAPS: In preparation for spring flights of the black cutworm, European corn borer and true armyworm, black light traps were installed at Arlington, Chippewa Falls, Janesville, Lancaster, Mazomanie, and other locations this week. A table listing weekly counts for 10 trap sites will be provided on the last page of each bulletin issue. Trappers should begin reporting by Thursday, May 14.

APPLE INSECT & BLACK LIGHT TRAP COUNTS MAY 1 - 7

COUNTY	DATE	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	AM RED[5]	AM YELLOW[6]
Bayfield	5/01-5/07	Keystone	0	0	—			
Bayfield	5/01-5/07	Bayfield Apple	16	0	—			
Brown	5/01-5/07	Oneida	450	45	—			
Chippewa	5/01-5/07	Chippewa Falls 1	100	100	0			
Chippewa	5/01-5/07	Chippewa Falls 2	—	—	—			
Crawford	5/01-5/07	Gays Mills	—	—	—			
Dane	4/30-5/07	Deerfield	1089	46	0			
Dane	5/01-5/07	Stoughton	28	108	0			
Dane	5/01-5/07	McFarland	—	—	—			
Dane	5/01-5/07	West Madison	8	58	0	8		
Dodge	5/01-5/07	Brownsville	840	42	0			
Fond du Lac	4/30-5/06	Campbellsport	105	57	0	0		
Fond du Lac	5/01-5/07	Malone	630	34	0	0		
Fond du Lac	5/01-5/07	Rosendale	—	—	—			
Grant	5/01-5/07	Sinsinawa	63	8	0			
Green	5/01-5/07	Brodhead	4	120	0			
Iowa	5/01-5/07	Dodgeville	675	171	—	18		
Iowa	5/01-5/07	Mineral Point	115	215	0			
Jackson	5/01-5/07	Hixton	650	82	0			
Kenosha	5/01-5/07	Burlington	450	41	0			
Marinette	5/01-5/07	Niagara	—	—	—			
Marquette	5/01-5/07	Montello	299	15	0	0		
Ozaukee	4/27-5/07	Mequon	25	12	0	0		
Pierce	5/01-5/07	Beldenville	272	36	0	36		
Pierce	4/30-5/07	Spring Valley	156	40	—			
Racine	5/01-5/07	Raymond	299	44	0	0		
Racine	5/01-5/07	Rochester	1700	114	0			
Richland	4/29-5/05	Hillpoint	310	180	—			
Sheboygan	5/01-5/07	Plymouth	120	255	0			
Waukesha	5/01-5/07	New Berlin	206	17	0	0		
Walworth	5/01-5/07	East Troy	—	—	—			
Walworth	5/01-5/07	Elkhorn	—	—	—			

[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.