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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, mostly dry weather allowed for continued soybean planting and harvesting of the spring alfalfa crop. High temperatures were seasonable for early June and ranged from the 60s to upper 70s, except along the Great Lakes, where highs in the 50s to low 60s prevailed. Nightly lows were in the 30s to mid-50s and an early-week frost developed over parts of northern Wisconsin. Light to moderate rain fell across the western counties, but conditions across much of the state were generally dry and sunny. Planting of corn, oats and potatoes neared completion and more than 86% of the corn crop has emerged, with 84% of planted acres in good or excellent condition. At this point last year, only 48% of corn acres had emerged. Meanwhile, the rainfall of late May eliminated residual soil moisture deficits and led to additional reductions in drought coverage in Wisconsin. During the week ending June 1, topsoil moisture rated very short to short declined from 20% to 8% statewide.

LOOKING AHEAD

TRUE ARMYWORM: Minor feeding damage to corn has been noted in Richland and Sauk counties. As stated last week, the significant moth flights documented since mid-May suggest small grains, corn and other crops are under a low to moderate threat of larval infestation this month and should be monitored for developing problems.

CODLING MOTH: A substantial flight is under way in several southern Wisconsin apple orchards. Moths have become increasingly abundant in the past two weeks and a definite potential exists for damaging populations if treatments directed against first-generation larvae are improperly timed. Counts for the period of May 28-June 3 ranged from 0-19 moths per trap, with the high count registered at Sinsinawa in Grant County.

ALFALFA WEEVIL: Larval counts and leaf tip damage have exceeded economic levels in scattered fields. Any remaining first-crop alfalfa should be harvested as soon as possible to limit further feeding by the larger and more destructive late-instar weevil larvae. Continued scouting is recommended through first harvest and early second-crop regrowth.

EUROPEAN CORN BORER: The spring flight has accelerated and is expected to peak by June 7 in the south-central and southwestern counties, June 14 in the southeastern and central areas, and June 21 in the north. Moths are not yet appearing in black light traps, though egg deposition is likely occurring in locations where 450 degree days (modified base 50°F) have accumulated.

SOYBEAN APHID: Colonization of VE-V1 soybeans was documented for the first time this season on June 1 in La Crosse County. Surveys found aphids in two fields, one near Onalaska and the other near West Salem. Densities

were extremely low at 1-9 aphids per infested plant on only 1-3% of the plants examined. This observation confirms that dispersal to soybean plants has started in Wisconsin.

Soybean aphids Krista Hamilton DATCP

FORAGES & GRAINS

ALFALFA WEEVIL: Larval populations continued to build under the wet weather pattern of late May. Counts in the southern counties now range from 1-11 per sweep, with an average of three per sweep. Lower averages of 1-2 per sweep were found in the central area. Leaf tip damage is generally less than 30%, although failure to harvest the first crop on time has permitted economic defoliation levels of 40-60% to develop in some fields in Columbia, La Crosse, Monroe and Richland counties. Larvae in the second and third instars are the predominant development stages. Damage will only intensify as more larvae transition into the larger third and fourth-instar stages. Harvesting first crop fields as soon as possible and monitoring regrowth for carryover of weevil larvae is strongly advised.

POTATO LEAFHOPPER: Migrants are widely distributed over the southern two-thirds of the state, though populations remain very low. The highest number found in the last reporting period was only 0.3 per sweep near Monroe in Green County. The economic threshold for this pest is 1.0 per sweep in 6-12 inch alfalfa and 2.0 per sweep in alfalfa 12 inches or taller.

PEA APHID: Populations from Green Lake south to Grant County ranged from 1-19 per sweep and averaged 5.6 per sweep, which is a slight increase from last week's average of 4.8 per sweep. The weekly high count of 19 per sweep was noted in Richland County. Pea aphid levels in alfalfa have presumably peaked and should begin to decline by mid-June.

DEGREE DAYS JANUARY 1 - JUNE 3

LOCATION	50°F	2014	NORM	48°F	40°F
Dubuque, IA	655	576	606	665	1088
Lone Rock	627	524	—	629	1021
Beloit	649	599	619	653	1071
Sullivan	466	418	560	463	802
Madison	607	511	582	607	985
Juneau	533	445	—	532	885
Racine	411	390	—	415	758
Waukesha	466	418	—	463	802
Milwaukee	416	391	471	420	758
Hartford	466	418	—	463	802
Appleton	488	378	—	487	836
Green Bay	415	332	475	429	761
Big Flats	578	455	—	558	878
Hancock	578	455	573	558	878
Port Edwards	550	424	557	534	869
La Crosse	646	507	648	656	1069
Eau Claire	545	430	570	547	925
Cumberland	472	351	505	453	780
Bayfield	328	228	—	300	521
Wausau	467	347	494	451	751
Medford	444	335	443	427	726
Crivitz	394	314	—	383	676
Crandon	406	300	398	377	626

Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2015. NORMALS based on 30-year average daily temps, 1981-2010.

CORN

EUROPEAN CORN BORER: Emergence of spring moths continued, but black light traps still have not registered a single specimen. This trend has become customary in recent years with the collapse of ECB populations. In fact, the highest count registered during the spring flight in the last three years was only 29 moths at Coon Valley from June 12-18, 2014. Historically, the DATCP network of black light traps once registered hundreds of moths during the peak emergence period in early June.

Despite the absence of moths in black light trap collections, low numbers of corn borer adults are active and

one female moth was observed on corn in Richland County on June 2. Since most corn is less than 18 inches tall and cannot support larval development, oviposition is likely occurring on peas, peppers, potatoes, snap beans and various weed hosts. Early planted corn in the mid-whorl, or 10-leaf stage, is most attractive for oviposition by the spring flight of moths.

BLACK CUTWORM: Crop advisors and growers should continue to inspect late-planted corn for another two weeks or until plants have reached the five-leaf (V-5) stage, particularly fields with earlier winter annual weed problems. Signs of cutworm activity have been encountered at a very small percentage of sites surveyed in the last 2-3 weeks, though significant injury has not been reported or observed as of June 3.

STALK BORER: Larvae are expected to begin migrating from grassy areas into corn in the next two weeks. Spot checking the 4-6 border rows for plants with holes in the leaves, wilted whorls and other early signs of damage is advised starting at 1,400 degree days (sine base 41°F). Control measures may be in order for fields with infestations affecting 5% or more of plants. Stalk borer degree day totals as of June 3 were: Beloit 1,055, Madison 987, La Crosse 1,057, and Spring Green 1,021.

Stalk borer larva *Krista Hamilton DATCP*

TRUE ARMYWORM: Minor infestations in corn were noted in four of 33 fields sampled since the last report. Small larvae ranging in length from ½-¾ inch were found at two of the sites. Based on these observations and considerable moth flights during the previous 3-4 weeks, more concentrated scouting of corn and wheat should begin at this time. A rescue treatment may be justified this month if 25% of plants are infested with two or more small larvae (¾ inch or shorter) or 75% of plants are infested with larvae of any size.

True armyworm larva *Krista Hamilton DATCP*

SOYBEANS

BEAN LEAF BEETLE: Surveys conducted across the southern half of the state found light defoliation in 20 of 43 (47%) soybean fields. Less than 5% of the plants were affected and beetle counts were very low, ranging no higher than 1-2 per 25 feet of row. Chemical control of this pest during the soybean vegetative stages should be considered only if defoliation levels exceed 40% or if populations of 39 or more beetles per foot of row are observed. Economic damage directly attributable to bean leaf beetle has never been documented in Wisconsin soybeans.

Bean leaf beetle *Krista Hamilton DATCP*

SOYBEAN APHID: This insect has begun to colonize soybeans in western Wisconsin. Alates (winged aphids)

and nymphs were detected on 1-3% of the plants in two of nine fields surveyed in Iowa and La Crosse counties from May 28-June 3. Densities were extremely low at 1-9 aphids per infested plant. Thirty-four additional fields examined in Dane, Columbia, Grant, Iowa, Jefferson, Lafayette, Richland, Sauk, Trempealeau, Vernon and Waukesha counties had no detectable aphid population.

FRUITS

CODLING MOTH: Counts have been highly variable since the spring flight began, with some monitoring locations registering large, consistent flights and others capturing few or no moths. A larvicide application made 250 degree days (base 50°F) after biofix is the standard control for orchards that have documented significant flights in the last two weeks. By contrast, in locations where the spring flight has been minimal, it is recommended that growers delay applications until 350 degree days post-biofix, when a greater percentage of the larval population has emerged. Setting additional pheromone traps would also be beneficial in identifying localized areas of moth activity within the orchard if counts remain low and a precise biofix cannot be established. A density of one trap per 2.5 acres (or one per five acres where blocks are uniform in size, shape and topography) is suggested. Orchard IPM Specialist John Aue considers a cumulative count of 20 or fewer moths in the 250 degree day interval after biofix to be a small flight, and recommends that growers in this situation delay spraying until 350 degree days.

Codling moth *Graham Calow www.naturespot.org.uk*

GRAPE PLUME MOTH: Reports from vineyards in Monroe, Ozaukee and Vernon counties indicate larvae are feeding on grape foliage and webbing together terminal leaves of shoots. The green caterpillars with whitish hairs commonly appear in late spring in perimeter rows near wooded areas. Their feeding on interveinal areas of leaves and characteristic webbing on young terminals is generally low-impact and control is usually not required. However, in exceptional cases, spot treatment of infested rows with Bacillus thuringiensis var. kurstaki (Btk) may be considered. Since Bt must be ingested by larvae to be lethal, it is imperative to confirm the presence of caterpillars and treat only if the larvae are small enough that continued feeding is expected. Grape growers who notice shoots with young leaves webbed together are advised to unroll the leaf to verify that the larvae inside is grape plume moth.

Grape plume moth larva *Mike Cesarz*

OBLIQUEBANDED LEAFROLLER: The spring flight continued for the second week with the capture of moths as far north as Greenwood in Clark County. Late-instar larvae and rolled leaves are still evident at some sites, indicating that moths should continue to emerge over the course of several weeks. The recommended scouting procedure for OBLR is to begin checking terminals for small larvae 7-10 days after the first moths are captured. Although there is no direct correlation between trap counts and larval populations, scouting is important since orchards that register even low counts (< five moths per trap) can develop significant larval problems a few weeks after a flight has occurred. Control is warranted for populations averaging three or more larvae per tree.

REDBANDED LEAFROLLER: Most orchards are between flights and populations consist primarily of the larval stages. The second flight should start at most orchard locations by mid-June. Apple growers are reminded to

replace pheromone lures for both RBLR and STLM in preparation for the second flights.

VEGETABLES

COLORADO POTATO BEETLE: Oviposition has started across southern and central Wisconsin. The bright orange-yellow eggs deposited by the females should now be apparent on the undersides of potato leaves. At normal June temperatures, the eggs hatch in 4-8 days and larvae mature to the third instar stage in another 5-9 days. These early individuals are usually less destructive than the summer generation. Treatment is justifiable for pre-flowering, 6-8 inch potatoes when defoliation of exceeds 20-30%.

Colorado potato beetle eggs utmarketgarden.wordress.com

VARIEGATED CUTWORM: Larvae were found in counts of 1-3 per 100 plants in two Richland County cornfields. This sporadic pest, which appeared in record numbers in field, forage and vegetable crops in 2012, is one of the most damaging cutworms on beans, potato and tomato. The larvae noted near Richland Center were approximately 3/4 inch-long on June 2.

STRIPED CUCUMBER BEETLE: Adults are expected to become increasingly abundant by mid-June. Growers of cucurbits should begin inspecting plants for these yellow and black striped bacterial wilt vectors which infect cucumbers, melons and squash through feces or contaminated mouthparts. The first symptom of bacterial wilt on cucumber and melon is a distinct flagging of lateral and individual leaves. Early beetle control may be justified for populations of one beetle per plant in melons, cucumbers and young pumpkins, and five beetles per plant for less susceptible cucurbits such as watermelon and squash.

RED TURNIP BEETLE: This occasional pest of vegetables in the Central Sands area of the state was observed in Juneau County alfalfa on June 1, likely feeding on weeds in the field margins. Its hosts include broccoli, cabbage, kohlrabi, radish and turnip, although hoary alyssum, yellow rocket and other mustards are thought to be the primary food plants. Damage to home gardens is rare and was last documented 6-7 years ago near Hayward in Sawyer County.

Red turnip beetle Doug Waylett flickr.com

NURSERY & FOREST

ANTHRACNOSE: Viburnums and lupines at nurseries in Ozaukee and Racine counties were exhibiting foliage with brown, necrotic spots caused by this fungal disease of many herbaceous and woody plants. Anthracnose rarely results in permanent damage unless severe symptoms persist for several consecutive years. No corrective action is needed, aside from disposing of infected leaf litter and debris to reduce inoculum sources.

RED SPOT OF PEONY: Peonies at garden centers in Fond du Lac, Richland and Oneida counties were infected with this fungal disease, characterized by small, circular, reddish or purplish spots that appear on the upper surfaces of young leaves shortly before bloom. Later in the season, the lesions expand and merge to form large, irregular blighted areas. All above-ground parts of the peony are susceptible to red spot. This disease is an aesthetic problem that can be controlled by cutting back plants to ground level in fall and destroying

infected foliage. Fungicides labeled for red spot can also provide control and should be applied to the soil around plants in spring, when new shoots are 2-4 inches tall. A second post-emergence application may be needed.

Red spot on peony Liz Meils DATCP

BASIL DOWNY MILDEW: This disease has been laboratory-confirmed on basil plants from a Milwaukee County garden center. First reported in Wisconsin in 2010, basil downy mildew can rapidly devastate basil crops and render plants unmarketable. Diagnostic characteristics include yellowing and downward curling of foliage and grayish-purple, fuzzy sporulation on leaf undersides. This disease can spread by infected seed, transplants or by windblown spores and thrives under warm, humid conditions, with symptoms progressing from the lower leaves upward.

Basil downy mildew Meg McGrath blogs.extension.org

All basil seedlings and transplants should be closely inspected for yellowed leaves and gray downy growth on the lower leaf surface. If basil downy mildew is found, the infected plant should be promptly removed and destroyed. Only certain fungicides can protect plants from this disease and spray treatments must begin before infection occurs to be effective.

MISLABELED PLANTS: Calla lilies and Aloha lilies, plants that are winter-hardy only in USDA zones 7-10, were incorrectly labeled as perennials at garden centers in Racine and Richland counties. These plants are unable to survive Wisconsin winters and therefore cannot be sold as perennials in this state. The bulbs must be dug up with the first threat of a hard frost in late fall and stored in a cool, dry place over the winter months.

Aloha lily mislabeled as a perennial Ellen Hermanson DATCP

GYPSY MOTH: Btk applications are expected to be completed in Bayfield and Douglas counties on June 9, marking the conclusion of the first phase of the 2015 treatment season. Counties receiving Btk applications this spring were: Barron, Bayfield, Buffalo, Burnett, Chippewa, Crawford, Douglas, Dunn, Eau Claire, Green, La Crosse, Monroe, Polk, Richland, Rock, Rusk, Trempealeau, Vernon and Washburn. Seventy-seven sites totaling about 28,000 acres were treated with Btk, most of which received two applications. Five sites totaling about 1,200 acres were treated with Gypchek. The first phase of the program targeted gypsy moth larvae; the second phase, which utilizes a pheromone mating disruptor, will target the gypsy moth adult stage. Mating disruption treatments are planned for late June or early July.

APPLE INSECT & BLACK LIGHT TRAP COUNTS MAY 28 - JUNE 3

COUNTY	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	APB[5]	LPTB[6]
Bayfield	Keystone	6	0	0	0	—	—
Bayfield	Orienta	9	0	—	—	0	0
Brown	Oneida	250	9	11	0	—	—
Clark	Greenwood	10	0	0	3	20	3
Columbia	Rio	0	0	6	0	0	19
Crawford	Gays Mills	10	0	0	—	2	6
Dane	Deerfield	70	8	9	0	—	—
Dane	DeForest	0	0	5	0	12	8
Dane	Edgerton	0	3	0	0	15	16
Dane	McFarland	5	0	0	—	—	—
Dane	Mt. Horeb	0	26	1	4	20	24
Dane	Stoughton	4	5	12	0	0	26
Fond du Lac	Campbellsport	7	5	0	0	0	6
Fond du Lac	Malone	2	3	8	0	0	3
Fond du Lac	Rosendale	17	8	4	0	0	0
Grant	Sinsinawa	—	—	19	31	—	—
Green	Brodhead	0	1	4	0	32	14
Iowa	Mineral Point	8	4	8	1	2	23
Jackson	Hixton	17	13	3	0	0	3
Kenosha	Burlington	8	1	1	0	3	9
Marathon	Edgar	—	—	—	—	—	—
Marinette	Niagara	3	0	5	0	0	1
Marquette	Montello	8	0	2	0	—	—
Ozaukee	Mequon	50	5	4	0	0	2
Pierce	Beldenville	66	2	1	0	0	0
Pierce	Spring Valley	31	6	0	0	2	11
Racine	Raymond	11	3	15	0	0	8
Racine	Rochester	10	2	10	0	7	21
Richland	Hill Point	33	1	7	0	9	44
Sheboygan	Plymouth	45	20	8	0	0	10
Walworth	East Troy	21	14	1	6	0	1
Walworth	Elkhorn	17	32	0	3	0	6
Waukesha	New Berlin	0	6	12	0	0	10

[1]Spotted tentiform leafminer; [2]Redbanded leafroller; [3]Codling moth; [4]Obliquebanded leafroller; [5]American plum borer; [6]Lesser peachtree borer.

COUNTY	SITE	BCW[1]	CEL[2]	CE[3]	DCW[4]	ECB[5]	FORL[6]	SCW[7]	TA[8]	VCW[9]	WBC[10]
Columbia	Arlington	0	4	0	1	0	0	0	0	0	1
Columbia	Pardeeville	0	2	0	0	0	0	2	6	2	0
Crawford	Prairie du Chien	0	0	0	0	0	0	0	0	0	0
Fond du Lac	Ripon	0	0	0	0	0	3	0	7	0	0
Manitowoc	Manitowoc	0	0	0	0	0	6	0	4	0	0
Marathon	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	Sparta	—	—	—	—	—	—	—	—	—	—
Rock	Janesville	0	3	0	0	0	0	3	3	0	0
Walworth	East Troy	0	1	0	0	0	0	0	0	1	0
Wood	Marshfield	0	0	0	0	0	0	2	7	0	0

[1]Black cutworm; [2]Celery looper; [3]Corn earworm; [4]Dingy cutworm; [5]European corn borer; [6]Forage looper; [7]Spotted cutworm; [8]True armyworm; [9]Variegated cutworm; [10]Western bean cutworm.