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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

Intermittent rainfall during the week disrupted alfalfa harvesting and left planting of the final corn, oats and potato acres incomplete. Several rounds of showers and thunderstorms soaked much of Wisconsin from May 24-27, with daily rainfall amounts of 1 to 2 inches common statewide. Totals in excess of 2.5 inches were reported on May 26 from a few northern Wisconsin locations and a record rainfall of 1.84 inches occurred at Wausau, surpassing the previous record of 1.64 inches set in 1921. The additional timely rain alleviated soil moisture deficits and above-average temperatures helped maintain very favorable early-season crop prospects. At the end of May, the outlook for the state's field crops is promising, particularly after an early and rapid start to the planting season. Condition ratings for corn, alfalfa and oats range from 80-85% good to excellent and development of all three remains well ahead of last year and the five-year averages.

LOOKING AHEAD

EUROPEAN CORN BORER: Moths are depositing eggs on vegetable and weed hosts in southern and central locations where 450 degree days (modified base 50°F) have been surpassed. Snap beans, lima beans, peppers, potatoes and various weeds will be used for oviposition until corn taller than 18 inches becomes available. The spring flight is expected to peak by June 7 near Beloit, Lancaster, Spring Green and other advanced sites.

BLACK CUTWORM: The primary damage period for corn is now open and could extend through mid-June this year. Crop consultants and corn growers should continue to inspect fields for evidence of this pest during the next 2-3 weeks or until plants have reached the five-leaf (V5) stage. A rescue treatment is justified if 3% of corn plants are damaged.

CODLING MOTH: Emergence of spring moths accelerated from May 21-27 and the biofix was set at several monitoring sites. Controls directed against first-generation larvae are generally most effective when applied at approximately 250 degree days (base 50°F) after biofix, which is the equivalent of 17 calendar days at daily high temperatures of 75°F and daily lows of 55°F. Exact treatment dates will vary by location and with temperatures in the week ahead.

EASTERN TENT CATERPILLAR: Most tents in roadside trees are vacant and pupation has started. The earliest adults could begin emerging by June 8, following the accumulation of 725 degree days (modified base 50°F).

ALFALFA WEEVIL: Leaf tip damage is expected to become more pronounced next week as larvae transition

into the larger and most destructive third and fourth instars. Alfalfa should be harvested as soon as possible to limit larval feeding and avoid the need for insecticide.

TRUE ARMYWORM: Significant flights have been registered on warmer nights for the last three weeks and small larvae are appearing in low numbers in alfalfa sweep net collections. Small grains, corn and other susceptible crops are under a low to moderate threat of larval infestation and should be monitored next month for developing problems.

True armyworm larva Krista Hamilton DATCP

FORAGES & GRAINS

PEA APHID: This insect continues to be abundant in most alfalfa fields in the southern half of the state. Densities currently range from 1-18 per sweep and average seven per sweep. The rainy weather of the past 2-3 weeks promotes the spread of fungal pathogens that regulate pea aphids and could cause an abrupt population collapse next month.

POTATO LEAFHOPPER: Migrant adult populations are still well below threshold at 0-0.2 per sweep. The weekly high count was found near Oconomowoc in Waukesha County. Reproduction had not started as of May 27.

GRASS SAWFLY: Low numbers of these pale yellow, striped larvae have been found in scattered alfalfa fields. The caterpillar-like worms are the immature form of the grass sawfly, an insect belonging to the bee and wasp order, Hymenoptera. The larvae, which should not be mistaken for armyworms, are suspected of feeding on grasses and pose no threat to alfalfa.

DEGREE DAYS JANUARY 1 - MAY 27

LOCATION	50°F	2014	NORM	48°F	40°F
Dubuque, IA	566	429	504	568	938
Lone Rock	537	386	—	535	876
Beloit	556	452	514	557	925
Sullivan	391	300	458	387	681
Madison	519	376	484	516	846
Juneau	452	318	—	449	754
Racine	344	281	—	346	641
Waukesha	391	300	—	387	681
Milwaukee	348	279	383	349	641
Hartford	391	300	—	387	681
Appleton	410	258	—	407	707
Green Bay	344	221	387	356	640
Big Flats	493	327	—	472	747
Hancock	493	327	473	472	747
Port Edwards	468	298	460	450	739
La Crosse	552	362	537	555	917
Eau Claire	463	293	471	461	786
Cumberland	398	227	410	375	652
Bayfield	282	147	—	255	445
Wausau	392	231	402	377	633
Medford	376	219	358	358	614
Crivitz	325	204	—	315	562
Crandon	339	190	325	312	521

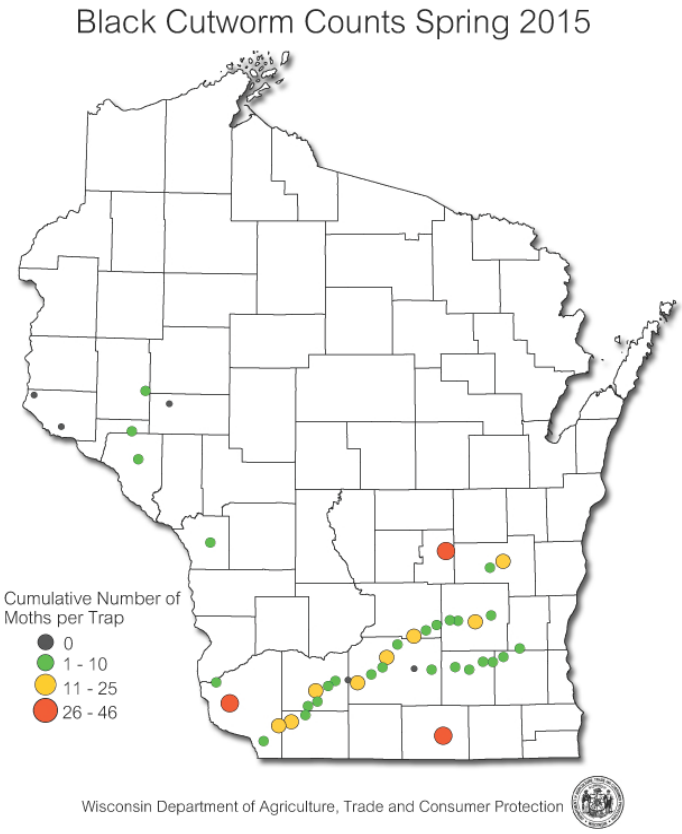
Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2015. NORMALS based on 30-year average daily temps, 1981-2010.

ALFALFA WEEVIL: Larval populations have increased significantly since the last report. Counts in the southern half of the state now range from 1-9 larvae per sweep and average four per sweep, compared to less than one per sweep last week. Surveys indicate leaf tip feeding damage is still below the 40% threshold in most first-crop alfalfa, but this may change as larvae reach the later instars and if wet weather continues to delay harvest. Any first-crop alfalfa that is not cut soon could be severely degraded. Management plans at this time should include harvesting fields during the next rain-free period and monitoring regrowth for carryover of weevil larvae.

CORN

BLACK CUTWORM: Larvae resulting from flights of moths that oviposited in corn earlier this month are now in the destructive late-instar cutting stages. Although the

most important factors influencing their damage potential are previous weed infestation and reduced tillage, crop advisors and corn growers should be aware that problems can develop in conventionally tilled and Bt fields as well. Timely detection of cutworm infestations is critical for insecticide treatments to be effective and economical. Scouting may be discontinued after the five-leaf stage.



TRUE ARMYWORM: Migrants have been collected over a wide area of the state this month. The black light traps at Janesville, Manitowoc, Marshfield, Pardeeville and Ripon registered counts of 1-102 moths last week and 1-51 moths this week. True armyworm flights sometimes precede larval outbreaks by 3-4 weeks, and these counts should be viewed as an early warning of potential problems.

EUROPEAN CORN BORER: The degree day model for this pest suggests egg deposition has started in areas of the state where 450 degree days (modified base 50°F) have accumulated, including Beloit, Hancock, Madison and La Crosse. If warm temperatures continue early next month, the first flight could peak by June 7 in the south-central and southwestern counties, June 14 in the southeastern and central areas, and about one week later in the north.

SOYBEANS

SOYBEAN APHID: Surveys for aphids were negative again this week. Colonization of soybeans is expected to start in the week ahead.

BEAN LEAF BEETLE: Soybean fields in Columbia, Dane and La Crosse counties are showing 2-5% of plants with minor defoliation caused by this insect. Damage is currently limited to a few holes in the leaves, but injury could become more severe early next month as additional beetles migrate to emerging soybeans.

Bean leaf beetle defoliation *Erin Hodgson ISU*

FRUITS

PLUM CURCULIO: Adult migration into orchard edges continued this week, and feeding and oviposition scars are appearing on apples and plums. Growers who applied PC petal fall treatment should be aware that recent wet weather likely degraded efficacy of insecticides and a perimeter application may be needed 7-10 days following a petal fall spray to prevent the further migration of PC into the orchard. Organic growers have the option of applying Surround® WP (kaolin clay) to orchard blocks. Another control strategy is to leave untreated (no Surround®) “trap rows” of early varieties which are then treated with an insecticide (e.g. PyGanic) on a warm night when the weevils are most active.

CODLING MOTH: A significant increase in codling moth activity was charted in the last week. Counts varied from 0-37 per trap and averaged five per trap. Four of the 32 monitoring locations registered very high counts of 10 or

more moths per trap. The spring biofix has now been set in several southern and central Wisconsin orchards and growers should make preparations to apply controls at 250 degree days (base 50°F) from their specific biofix date. Treatment during this window is intended to eliminate most of the newly-hatched larvae before they enter fruits.

Codling moth eggs and newly-hatched larva *ucanr.edu/blogs*

OBLIQUEBANDED LEAFROLLER: The first of two flights expected this season has begun following the accumulation of 600 degree days (simple base 43°F). Sampling of 10 fruit clusters and 10 terminals in the outsides, centers, and tops of five trees per orchard should occur on a weekly basis after pheromone traps indicate that emergence of spring moths has started. Control is warranted for populations averaging three or more larvae per tree.

SPOTTED TENTIFORM LEAFMINER: Moth counts were low again this week and ranged from just 0-327 per trap, with an average of 51 per trap. These low counts signal most apple orchards are between flights and populations consist primarily of late-instar tissue feeder larvae. Counts are expected to increase sharply in the next two weeks as the second flight begins. The economic threshold for STLM increases from 0.1 to 1.0 mine per leaf for the second generation of sapfeeder larvae.

REDBANDED LEAFROLLER: Counts of this pest also remained comparatively low during the May 21-27 reporting period. The first flight peaked about two weeks ago and counts have been on the decline since then. The second flight should start at most orchard locations by early to mid-June. Apple growers are reminded to replace pheromone lures for both RBLR and STLM in preparation for the second flights.

VEGETABLES

STRIPED CUCUMBER BEETLE: Seedling and transplanted cucurbits will be at risk of feeding damage and bacterial wilt transmission as beetle emergence continues next month. Protecting young plants with floating row covers, screens or cones can reduce the risk of bacterial wilt and is advised for highly susceptible cucurbits such as cucumbers and melons. Any covering must be removed once plants begin to flower to permit pollinator access and ensure subsequent fruit set. A count of one beetle per plant for melons, cucumbers, and young pumpkins and five beetles per plant for less susceptible cucurbits (watermelon, squash, older pumpkins) signals bacterial wilt is a distinct possibility if the beetle population is not promptly controlled. Seedlings are more susceptible both to feeding damage and disease and should be monitored at least twice weekly when plants are emerging.

Striped cucumber beetle *Mark Jankura flickr.com*

IMPORTED CABBAGEWORM: Larvae have emerged across much of southern Wisconsin. Home gardens and larger cabbage plantings should be checked weekly for the yellow eggs laid singly on plants and for velvety green caterpillars with a yellow longitudinal stripe. The economic threshold for this pest in cabbage is 30% infestation at the transplant to cupping stages.

COLORADO POTATO BEETLE: Adults continue to colonize potato fields and oviposition has started. Systemic insecticides applied at planting or emergence typically provide adequate control of the overwintered

adults and first generation of larvae, but a foliar spray may also be needed if scouting indicates early-season CPB pressure is higher than anticipated. The first of two foliar applications of an insect growth regulator or the biological insecticide Bt should be made at egg hatch and again 7-10 days later.

Colorado potato beetle eggs ecotanjim.files.wordpress.com

NURSERY & FOREST

NON-VIABLE NURSERY STOCK: Most nursery plants that have not leafed out by now are considered non-viable and cannot be sold. Non-viable stock was found during the week ending May 27 at retail locations in Jefferson, Milwaukee, Racine and Washington counties. Dry bulbs, trees and shrubs with plastic-wrapped roots are particularly susceptible to moisture deficiency problems after distribution to retail stores and should be sold within three weeks of arrival. Non-viable stock may be set aside and observed for later growth, but otherwise must be destroyed or returned to the supplier.

FLETCHER SCALE: Nursery inspectors report that mobile crawlers have been observed in Dane, Eau Claire and Jefferson counties. This scale pest of arborvitae, juniper and yew can cause yellowing, premature needle drop or branch dieback. For severe infestations, horticultural oils or soaps, insect growth regulators or conventional insecticides may be used as soon as the crawlers are noticed.

PSEUDOMONAS BLIGHT: Potted lilacs in Chippewa and Eau Claire counties were showing classic symptoms of this disease, namely yellowish-brown leaf lesions, black streaks along the leaf veins and midribs, and withered, black shoots which bend to form a distinctive shepherd's crook. Pseudomonas blight develops on lilacs during cool, wet weather and spreads by rain and splashing water. Control consists of pruning out blighted twigs as soon as they occur, thinning plants to increase air circulation and growing resistant varieties. Pruning shears should be disinfected with bleach or 70% alcohol between cuts to prevent spread of the disease.

Pseudomonas blight on lilac DATCP Nursery Program

SEPTORIA LEAF SPOT: Spirea shrubs in Brown County were found to be infected with this common fungal disease. Diagnostic characteristics are small, dark purple lesions that first appear on the lower leaves and stems and later enlarge and spread to the upper leaves. The simplest cultural control is to increase plant spacing to promote airflow.

Septoria leaf spot on spirea DATCP Nursery Program

TOBACCO RATTILE VIRUS: Recent greenhouse inspections found 74% (25 of 34) of bleeding heart plants tested

at the Plant Industry Laboratory to be positive for tobacco rattle virus (TRV). The varieties infected were alba, pink and Valentine, while fern-leaf bleeding hearts "King of Hearts", "Love Hearts" and "Luxuriant" were negative for the TRV. Other ornamentals testing positive for TRV this month were astilbe, epimedium and paeonia. Standard symptoms on these hosts are ringspots and wavy light green lines on leaves.

Tobacco rattle virus on astilbe *Anette Phibbs DATCP*

Tobacco rattle virus infects over 400 plant species, including ornamentals and agricultural crops such as potatoes. There is no treatment for this increasingly common virus and infected plants must be destroyed.

Tobacco rattle virus on epimedium *Anette Phibbs DATCP*

GYPSY MOTH: Aerial spraying has been completed for the season in 12 southern and western counties: Buffalo, Chippewa, Crawford, Dunn, Green, La Crosse, Lafayette, Monroe, Richland, Rock, Trempealeau and Vernon. Larval development is most advanced in the south, although egg hatch and larval dispersal have been noted across much of central Wisconsin as well. Cooler temperatures before Memorial Day slowed white oak foliage expansion and caterpillar feeding across northern Wisconsin, and larval hatch has not started at field observation sites in Bayfield and Douglas County. Aerial spray treatments there are expected to be completed by the second week of June.

EUONYMUS CATERPILLAR: Heavy infestations of this insect have been reported from the Appleton area of east-central Wisconsin. The larvae observed on May 28 were near maturity and their webs had enveloped entire trees and shrubs. Chemical control is no longer advised in locations where larvae have reached the later instars and are likely to pupate soon. Smaller infestations may be successfully treated by hand pruning to remove the infested foliage.

Euonymus caterpillar webbing *Chris Lettau DATCP*

APPLE INSECT & BLACK LIGHT TRAP COUNTS MAY 21 - 27

COUNTY	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	APB[5]	LPTB[6]
Bayfield	Keystone	25	12	0	0	—	—
Bayfield	Orienta	21	2	—	—	—	0
Brown	Oneida	20	2	0	0	—	—
Clark	Greenwood	24	12	0	6	0	6
Columbia	Rio	5	—	—	0	0	—
Crawford	Gays Mills	44	30	1	0	3	3
Dane	Deerfield	50	10	12	0	—	—
Dane	DeForest	0	5	1	0	6	0
Dane	Edgerton	52	7	0	6	12	2
Dane	McFarland	56	27	—	—	—	—
Dane	Mt. Horeb	9	12	1	0	43	3
Dane	Stoughton	11	13	7	0	0	1
Fond du Lac	Campbellsport	25	14	0	0	0	0
Fond du Lac	Malone	15	1	37	0	2	1
Fond du Lac	Rosendale	10	16	2	1	3	0
Grant	Sinsinawa	—	—	—	—	—	—
Green	Brodhead	4	9	13	0	11	12
Iowa	Mineral Point	20	8	4	0	8	0
Jackson	Hixton	20	9	2	2	1	0
Kenosha	Burlington	45	11	4	0	5	4
Marathon	Edgar	142	34	0	0	0	2
Marinette	Niagara	10	0	0	0	0	0
Marquette	Montello	12	8	0	0	—	—
Ozaukee	Mequon	75	5	3	0	0	0
Pierce	Beldenville	196	20	10	0	0	0
Pierce	Spring Valley	62	15	2	0	0	1
Racine	Raymond	327	32	0	0	0	0
Racine	Rochester	94	33	8	0	11	6
Richland	Hill Point	—	7	8	0	19	11
Sheboygan	Plymouth	55	34	3	0	2	0
Walworth	East Troy	100	0	0	1	2	0
Walworth	Elkhorn	11	53	0	2	2	1
Waukesha	New Berlin	15	32	6	0	0	0

[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	—	—	—	—	—	—	—	—	—	—
Columbia	Pardeeville	1	2	1	0	0	2	1	5	0	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	51	0	0
Manitowoc	Manitowoc	2	7	0	0	0	18	1	11	0	0
Marathon	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	Sparta	—	—	—	—	—	—	—	—	—	—
Rock	Janesville	0	7	0	0	0	0	0	14	0	0
Walworth	East Troy	2	2	0	0	0	3	0	0	0	0
Wood	Marshfield	0	1	0	0	0	0	1	3	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.