

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
2811 Agriculture Dr. Madison, WI 53718 • <http://pestbulletin.wisconsin.gov>

WEATHER & PESTS

Heat and humidity prevailed through the first half of the week, with highs from the upper 70s to mid-90s. A complex of thunderstorms arrived in Wisconsin late Sunday night and unsettled weather continued through Wednesday. Most of the storm activity and precipitation affected the central and northern areas, particularly the northwest where excessive rains during the last several weeks have saturated soils and caused flash flooding. Rainfall continued to bypass the southern and eastern areas and the persistent hot, dry weather is adversely affecting crop development. Crop condition ratings have further declined with the lack of significant rain this month. Corn and soybean ratings have been downgraded to 63% and 62% good to excellent, respectively, as of June 17, a decrease from 71% and 67% last week. Meanwhile, high temperatures favored activity of potato leafhoppers and stimulated the emergence of the first corn rootworm beetles and western bean cutworm moths of the year.

LOOKING AHEAD

VARIEGATED CUTWORM: Damage has intensified in alfalfa, corn and soybean fields in all areas of the state. A report from Fond du Lac County states that “uncountable” numbers of larvae were found in soybeans near Ripon and another four-acre field in the Loganville area of Sauk

County was reportedly “chewed down to the stems”. Based on surveys and anecdotal reports, the areas of highest concentration are in the east-central and central districts, including Fond du Lac and Green Lake counties. Cutworms have also been noted in Adams, Barron, Clark, Columbia, Fond du Lac, Grant, Manitowoc, Marathon, Marquette, Sauk, Waupaca, Waushara and Winnebago counties. Continued scouting is imperative at this time, especially alfalfa regrowth, which is highly attractive to the cutworms.

EUROPEAN CORN BORER: The treatment window for first generation larvae has closed near Beloit, Madison, La Crosse, Sullivan and at other locations where 1,100 degree days (base 50°F) were surpassed as of June 20. Larvae are entering the midribs of corn leaves, although feeding is still mostly confined to the whorls. Insecticidal control remains an option in the southeast, central, east-central and northern counties for another week. Corn and vegetable growers concerned about European corn borer damage should appraise the percent of infested plants now and not wait to apply controls if justified. The larvae will soon bore into the stalks where they are protected from chemical sprays.

JAPANESE BEETLE: Emergence of Japanese beetles has been noted in Dane, Racine and Rock counties. Damage to fruit trees, perennials, nursery stock and field crops can be expected for the next two months throughout

most of the state, as far north as Barron County in the northwest and Oconto County in the northeast. Soil-applied systemic insecticide treatments should have been made by now to allow 3-4 weeks for the material to be translocated before the beetles begin feeding.



Japanese beetle

Krista Hamilton DATCP

WESTERN BEAN CUTWORM: The annual flight began this week, with counts of 1-17 moths per trap registered in Adams, Brown, Jackson, Rock, Waushara and Wood counties. Based on current degree day accumulations, 25% of the moth population is expected to emerge during the next two weeks and the majority (50% emergence) should appear in trap collections by July 15. Oviposition on the flag leaf of corn has started in areas where the adults are active. Scouting for eggs and small larvae is recommended as soon as the first moths are registered.

FORAGES

POTATO LEAFHOPPER: Counts have increased markedly in the past week and are now above economic levels in many fields. Alfalfa acreage surveyed in Clark, Dane, Chippewa, Eau Claire, Pepin, Pierce, Polk, Portage, Rock, St. Croix, Waupaca and Waushara counties contained counts of 0.4-3.5 per sweep, with an average of 1.7 per sweep. Economic populations of 2.0-3.5 per sweep were noted in Chippewa, Polk, Waupaca and Waushara counties. Although treatment could be justified for these fields, early harvesting of the second crop is the preferred form of control.

ALFALFA WEEVIL: A few late-stage larvae still remain, but most have pupated and new adults are appearing in

DEGREE DAYS JANUARY 1 - JUNE 20

LOCATION	50°F	2011	NORM	48°F	40°F
Dubuque, IA	1236	865	912	1215	2099
Lone Rock	1229	813	—	1174	2054
Beloit	1275	877	923	1208	2143
Madison	1203	761	876	1165	2032
Sullivan	1188	770	850	1132	2013
Juneau	1135	707	—	1087	1940
Waukesha	1035	627	—	988	1814
Hartford	1024	611	—	986	1798
Racine	980	545	—	969	1758
Milwaukee	964	537	743	949	1733
Appleton	1023	588	797	1003	1794
Green Bay	942	509	740	947	1701
Big Flats	1085	642	—	1020	1841
Hancock	1080	640	855	1017	1840
Port Edwards	1029	617	831	979	1777
La Crosse	1188	766	967	1143	2014
Eau Claire	1049	669	856	1028	1831
Cumberland	883	596	771	880	1622
Bayfield	675	381	—	682	1290
Wausau	909	559	756	987	1615
Medford	903	576	682	925	1625
Crivitz	869	491	—	873	1588
Crandon	803	496	598	799	1470

*Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2012.
NORMALS based on 30-year average daily temps, 1981-2010.*

sweep net collections. Larval populations in second crop alfalfa have been reduced to less than 0.3 per sweep and no further problems are anticipated this year.

PEA APHID: Surveys in the central and northwest counties found low numbers of 1-5 aphids per sweep. Populations have declined since late May when counts were as high as 29 per sweep in many fields. The average this week was less than 2 per sweep.

VARIEGATED CUTWORM: Larvae were found in 9 of 42 fields checked in the central, east-central and northwest districts during the period of June 14-19, although the problem is much more widespread. According to reports from county extension agents and consultants, economic larval populations have been observed in Barron, Clark, Fond du Lac, Grant, Green Lake, Manitowoc, Marathon and Winnebago counties, and likely many other areas. During outbreak situations, alfalfa regrowth is favored by the cutworms and should be monitored every few days

for possible treatment needs. Control is suggested if the larvae are preventing regrowth and most of the cutworms are less than one inch in length. Larvae that are 1½ inches or longer are expected to pupate in a few days.

CORN

EUROPEAN CORN BORER: Surveys conducted in the northwest and west-central counties of Chippewa, Dunn, Eau Claire, Pepin, Pierce, Polk and St. Croix revealed very light infestations of 1-14 per 100 plants, with 74% of fields examined having no detectable population. Development of this insect has been accelerated by as much as 2-3 weeks this season, and first generation larvae are already entering the midribs of corn leaves. The treatment window has closed in the southern and west-central areas of the state with the accumulation of 1,100 degree days (base 50°F).



European corn borer leaf feeding damage Krista Hamilton DATCP

CORN ROOTWORM: Beetles of the western species were noted on June 20 in Vernon County. Emergence of this insect and the related northern corn rootworm will increase gradually during the next 3-4 weeks and may peak as early as mid- to late July. Research entomologists anticipate increased populations of the western species this year, citing higher populations in 2012, favorable overwintering conditions and drier soils as factors contributing to their recent resurgence in Wisconsin and the Midwest.

STALK BORER: Damage to corn has become more pronounced as larvae approach maturity. Examination of V5-9 corn fields found infestation rates of 2-20%, with the highest population noted near Mauston in Juneau

County. Spot treatment is no longer effective for many south-central fields since the larvae have bored into the stalks and unemerged tassels. Controls must be applied from 1,400-1,700 degree days (base 41°F), or prior to the V7 stage. Stalk borer feeding is unlikely to kill corn plants beyond V7.

YELLOW-STRIPED ARMYWORM: Localized populations have been noted in Dane, Dunn, Eau Claire, Grant, Lafayette, Rock, Sauk, Vernon and Waushara counties in the past two weeks. Damage attributed to this caterpillar has not surpassed economic levels thus far, but the combination of armyworms and variegated cutworms could push infestation rates above threshold. Populations of both caterpillars are higher than normal this season.

ZEBRA CATERPILLAR: This infrequent pest with prominent black and yellow longitudinal stripes was defoliating corn leaves in the Coleman area of Marinette County on June 15. Larvae feed during the day on the foliage of a variety of broadleaf field and vegetable crops, ornamental trees and flowers, causing ragged leaves. The young caterpillars initially feed together in groups, but later separate and feed individually. The zebra caterpillar occurs sporadically in Wisconsin and is generally not considered a serious pest.



Zebra caterpillars on corn Bobbi Schimmel Enviro-Pro/ AgVentures, LLC

SOYBEANS

SOYBEAN APHID: Populations are very low at most locations. Of the 39 fields examined in the southern, east-central and northwest areas from June 14-20, only 28% were found to have infestations. All had fewer than

2 aphids per plant based upon examination of 40 plants per field. Regular sampling should begin in the next two weeks as soybean fields enter the early reproductive stages of growth.

VARIEGATED CUTWORM: As previously noted, these caterpillars are particularly numerous this year and the larvae have caused extensive damage to a few soybean fields in the central and southern areas. Severe defoliation was documented on June 15 in a Fond du Lac County field after extraordinary numbers of larvae migrated from nearby alfalfa. Cutworms have also been reported or observed in soybeans in Columbia, Dodge, Green Lake and Manitowoc counties. The grower in Fond du Lac County is monitoring the field to determine if the plants will recover.



Variegated cutworm larvae in soybeans

Mike Weiss Syngenta

FRUITS

APPLE MAGGOT: The apple orchards near Mequon in Ozaukee County and Rosendale in Fond du Lac County reported their first flies of the season from June 14-20, while 26 other locations reported no activity. Counts ranged from 2-3 flies per trap. Yellow traps baited with ammonium acetate are effective for approximately one week and should then be replaced or rebaited. Red sphere traps may be used with or without fruit essence lure through harvest. The economic threshold for apple maggot is one fly per unbaited trap per week or five flies per baited trap.

EUROPEAN RED MITE: Orchardists should be aware of the possibility of outbreaks under present dry conditions. Trees exhibiting light bronzing can be inspected for adult

females on the upper and lower leaf surfaces and eggs near the midrib by using a 10x hand lens. Treatment is recommended if the economic threshold of 7.5 mites per leaf is exceeded.

SPOTTED TENTIFORM LEAFMINER: The second flight has peaked in several southern and central orchards. Very high counts of 500 or more moths per trap per week were registered in 8 of 28 apple orchards during the last reporting period. Egg laying is heavy at this time. The economic threshold for second brood leafminers is one mine per leaf.

SAN JOSE SCALE: Continued sampling by taping scaffold branches is advised to determine the relative abundance of scales, the end of the hatching period, and if control treatments applied last month were effective. The tape should be changed every 7-10 days for approximately one more month.

POTATO LEAFHOPPER: Populations have increased considerably this month. Although control may not be justified for orchards expecting a light fruit crop this year, growers are reminded that non-bearing, 1- to 2-year-old trees are very susceptible to leafhopper feeding and this is where scouting efforts should be concentrated. Treatment is warranted at levels of one or more nymphs per leaf when symptoms are apparent.

VEGETABLES

SQUASH VINE BORER: The early-stage larvae of this insect are excavating the stems and runner vines, causing squash plants to wilt. Closer examination of the vines should reveal entrance holes from which their sawdust-like frass is expelled. Varieties most susceptible to squash vine borer damage are 'Blue Hubbard', 'Boston Marrow' and 'Golden Delicious', while 'Butternut', 'Dickenson Pumpkin' and 'Green Striped Cushaw' have shown resistance.

STRIPED CUCUMBER BEETLE: Adults have been very active over the southern half of the state in the last two weeks. Growers of cucurbits should continue to monitor plants for these yellow and black striped beetles that transmit bacterial wilt of cucurbits, infecting cucumbers, melons and squash through feces or contaminated mouthparts. Control is warranted for populations of 4-5 beetles per 50 plants.

ONION MAGGOT: Second generation flies are emerging near Madison, La Crosse, Sullivan and other locations where 1,950 GDD (base 40°F) have been surpassed. Emergence is anticipated near Eau Claire, Hancock and Waukesha in the week ahead. Management of the summer generation is less critical than spring and fall populations since egg desiccation and mortality rates are higher at warmer temperatures, but season-long sanitation is still critical for preventing future problems. Second brood eggs are deposited near previously damaged onions.

TOMATO HORNWORM: Moths are active and laying eggs on the undersides of tomato leaves. Tomato growers who have experienced past problems with this pest should inspect the undersides of leaves for individually laid eggs that are smooth, spherical and pale green in color. Once the eggs hatch, the larvae grow very rapidly and quickly defoliate plants. Spot treatment may be justified for infestations of one or more larva per plant on a minimum of 10 plants. Prompt removal of the larvae is the best control measure.



Tomato hornworm larva

braddockoutdoor.bloggng.com

FLEA BEETLES: Reports indicate that flea beetles have been a persistent problem for home gardeners this season. In many instances their damage is aesthetic, but control may be considered for young plants if beetles are present on all plants and defoliation exceeds 30%.

WEEDS

MUSK THISTLE: Tall, flowering stalks are transitioning into the seed production phase of development across the southern counties. This aggressive, biennial weed

spreads only by seed, so mowing should occur prior to seed set to reduce the vigor of stands and minimize seed production. Thistle populations are particularly difficult to control in pasture settings where cattle avoid consuming the prickly leaves, but brush against the plants, aiding in seed dispersal.



Musk thistle

Wendy VanDyk Evans

NURSERY & FOREST

ROSE CHAFER: Beetles are especially prevalent in the central part of the state. The moderate-sized, tan scarabs are abundant in home gardens, nurseries and soybean fields and have been afflicting homeowners, gardeners and plant retailers for the last two weeks. A nursery near Fremont in Waupaca County was reportedly inundated with beetles last week, although the problem appears to have lessened since then. Similar to the Japanese beetle, this pest feeds on the flowers and foliage of a wide variety of plants, including apple, cherry, corn, dahlia, elder, elm, foxglove, geranium, grape, hollyhock, hydrangea, pear, peony, rose, Virginia creeper, wisteria and many other agricultural and ornamental crops. Populations are expected to diminish by early July.

GYPSY MOTH TREATMENT: From June 18-19, approximately 42,500 acres were treated with mating disruption flakes in Buffalo, Dunn, Eau Claire, Pepin and Rusk counties. Another 61,300 acres in Bayfield and Douglas counties are scheduled for treatment from June 27-29, marking the end of the 2012 spray season.

FIR-FERN RUST: This needle rust was prevalent on concolor and balsam firs grown in close proximity to ferns in Clark and Dunn County nursery and Christmas tree

fields inspected earlier in the week. Symptoms on firs include chlorotic, yellow needles with white pustules on the undersides. Infected needles dry out and drop prematurely, often in quantities that render trees unmarketable at fall harvest. Management options include removing alternate fern hosts, particularly bracken ferns, from the periphery and within fields by mowing or applying herbicide sprays.



Fir-fern rust

Konnie Jerabek DATCP

WHITE PINE WEEVIL: Scouting for evidence of larval attack, such as wilted leaders and brown, discolored needles on the top lateral growth is recommended at this time. This insect can be controlled by pruning the infested area 6-10 inches below the wilted leader before adults emerge in July. Pruned tops should be removed from fields and properly disposed of to prevent reinfestation.



White pine weevil damage

Konnie Jerabek DATCP

large containerized euonymus shrubs in a St. Croix County nursery. The plants, which were ordered removed from sale by the inspector, may be returned to the wholesale grower or destroyed, but cannot be treated on site and sold at a later time. This scale insect inhibits photosynthesis, reduces plant vigor and may kill entire plants. Control measures include pruning out and destroying infested branches before the mobile crawlers emerge, or applying insecticidal soaps or oils to newly hatched crawlers later this month, with four applications 10-12 days apart. Nursery retailers are advised to carefully examine incoming euonymus for this pest and reject any infested plants.

WHITE PINE APHID: Moderate-heavy colonies are infesting white pines in Clark County. These large, brown or black aphids generally have no effect on conifers, except in drought years or in high population situations when the aphids produce large quantities of honeydew which is colonized by sooty mold fungi. This can cause flagging and death of trees. Black sooty mold and ant activity are both indicators of aphid feeding.



White pine aphids

Konnie Jerabek DATCP

GYPSY MOTH SURVEY: As of June 20, trappers have set 12,948 traps or 68% of the estimated total of 19,000 traps. Moth flight is expected to begin between June 27 and July 6 in southern Wisconsin and a week later in northern areas.

WINGED EUONYMUS SCALE: Nursery inspectors noted overwintered females (the immobile stage) on several

APPLE INSECT & BLACK LIGHT TRAP COUNTS JUNE 14 - 20

COUNTY	SITE	STLM ¹	RBLR ²	CM ³	OBLR ⁴	OBLR ⁵	AM RED ⁶	YELLOW ⁷	GDD 50°F
Bayfield	Keystone	0	0	6	1		—	—	
Bayfield	Oriente	0	0	0	0		—	—	
Brown	Oneida	800	21	27	24		—	—	
Chippewa	Chippewa Falls	—	46	15	14		—	—	
Columbia	Rio	10	35	4	1		0	0	
Crawford	Gays Mills	991	109	2	10		—	—	
Dane	Deerfield	699	96	0	0		0	0	
Dane	McFarland	120	80	2	—		—	—	
Dane	Mt. Horeb	126	87	4	5		0	0	
Dane	Stoughton	210	122	8	3		0	0	
Dane	West Madison	430	75	22	0		—	—	
Dodge	Brownsville	0	37	12	24		0	0	
Fond du Lac	Campbellsport	75	40	0	11		—	—	
Fond du Lac	Malone	91	88	19	12		0	0	
Fond du Lac	Rosendale	77	6	5	9		—	3	
Green	Brodhead	6	32	4	1		0	0	
Jackson	Hixton	38	4	2	12		0	0	
Kenosha	Burlington	280	114	1	60		—	—	
Marathon	Edgar	609	5	14	38		—	—	
Marinette	Niagara	170	0	72	25		—	—	
Marquette	Montello	416	56	7	9		—	—	
Ozaukee	Mequon	110	16	13	5		*2	0	
Pierce	Beldenville	462	21	12	8		0	0	
Pierce	Spring Valley	214	44	11	5		0	0	
Polk	Turtle Lake	529	5	9	1		0	0	
Racine	Rochester	1300	30	32	27		0	0	
Richland	Hillpoint	1000	82	7	25		—	—	
Sheboygan	Plymouth	1200	0	45	25		—	—	

¹Spotted tentiform leafminer; ²Redbanded leafroller; ³Codling moth; ⁴Obliquebanded leafroller EASTERN; ⁵Obliquebanded leafroller WESTERN; ⁶Apple maggot red ball; ^{*}Unbaited AM trap; ^{**}Baited AM trap; ⁷Apple maggot yellow board.

COUNTY	SITE	ECB ¹	TA ²	BCW ³	SCW ⁴	DCW ⁵	CE ⁶	CEL ⁷	WBC ⁸	FORL ⁹	VCW ¹⁰
Chippewa	Chippewa Falls	4	0	0	0	0	0	1	0	0	0
Columbia	Arlington	1	0	0	0	0	0	0	0	0	0
Crawford	Prairie du Chien	0	0	0	0	0	0	0	0	0	0
Dane	Mazomanie	0	2	0	0	0	1	0	0	1	1
Fond du Lac	Ripon	9	7	0	0	0	2	0	1	35	0
Manitowoc	Manitowoc	0	5	0	6	0	0	0	0	0	0
Marathon	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	Sparta	0	0	0	0	0	0	0	5	0	0
Portage	Plover	—	—	—	—	—	—	—	—	—	—
Rock	Janesville	0	0	0	0	0	0	0	0	0	0
Vernon	Coon Valley	4	0	0	0	0	0	1	0	9	0
Walworth	East Troy	0	0	0	0	0	0	0	0		0
Wood	Marshfield	14	4	1	29	0	0	15	2	2	1

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