

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

Hot, humid and mostly dry weather predominated during the first two weeks of July, benefiting summer crops and pastures. Southerly winds brought warm summertime conditions to the state as above-normal temperatures in the mid-80s and lower 90s and light to moderate breezes prevailed. Locally heavy rain fell across the southern and central areas on July 8 and 9 and isolated thunderstorms in the north produced severe weather, but much of the state experienced the first extended dry period of the season. The warm, sunny weather allowed previously soggy fields to continue drying and promoted fieldwork that had been hampered by recent wet conditions, including harvesting of second crop alfalfa and treatment for weeds and diseases. Corn responded to the heat with rapid growth and increased from an average height of 20 inches last week to 31 inches this week. By various measures, the weather of early July has been the most favorable for crop development so far this season.

LOOKING AHEAD

WESTERN BEAN CUTWORM: The annual flight is under way in the southern, central and western portions of the state where pheromone traps registered 1-2 moths from July 4-10. Twenty five percent emergence of the adult population is anticipated in the next two weeks as far

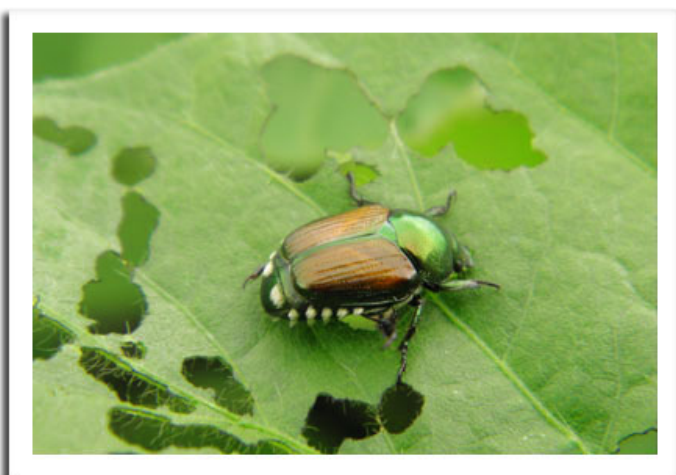
north as Hancock in Waushara County, or around 1,320 degree days (base 50°F). Cornfields in the pretassel stage are preferred oviposition sites and should be inspected for eggs and small larvae in the week ahead.

EUROPEAN CORN BORER: The treatment window for first generation larvae has closed near Beloit, Madison, La Crosse, Sullivan and other locations where 1,100 degree days (modified base 50°F) were surpassed as of July 10. 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 a few more days. Sweet corn and vegetable growers concerned about European corn borer damage should assess infestations now and apply controls before the larvae bore into plants where they are protected from chemical sprays.

CORN ROOTWORM: Beetles are appearing in low numbers in Dane and Rock counties. These insects will become increasingly abundant throughout July, with the peak of emergence expected by mid-August. If lodging occurs this month, corn roots must be closely evaluated to verify corn rootworm larvae as the cause of the damage. Growers of Bt-rootworm corn hybrids with the Cry3Bb1 trait (Monsanto's YieldGard RW and VT Triple products) who experience poor root protection this season and suspect resistance are advised to notify their seed company representative.

SOYBEAN APHID: Populations should be assessed in the week ahead as more soybean acreage enters the early reproductive stages of growth (R1-R2). At temperatures of 68-86°F, colonies can double in size every two days. Economic densities of 250 or more aphids per plant have not been detected in any Wisconsin soybean field surveyed to date, although a few sites have developed moderate populations of 100-142 aphids per plant since late June.

JAPANESE BEETLE: Emergence of Japanese beetles has been noted in southern Wisconsin in the last two weeks and a report from Monroe County states that heavy populations have been observed in soybeans and corn in the Cataract area. Damage to fruit trees, perennials, nursery stock and field crops can be expected in the next 6-8 weeks across most of the state. Soil-applied systemic insecticide treatments should have been made several weeks ago and are no longer advised for beetle control.



Japanese beetle

Krista Hamilton DATCP

FORAGES

POTATO LEAFHOPPER: Counts remain much the same as previously reported. Surveyed fields in Chippewa, Dunn, Eau Claire, Grant, Iowa, Lafayette, Pierce and St. Croix counties contained 0.1-1.9 per sweep, with an average of 0.6 per sweep. Populations in the east-central counties of Calumet, Fond du Lac, Outagamie and Winnebago were lower and varied from 0.1-0.7 per sweep. Economic counts have not been noted in any field checked as of July 10, although nymphs are common and levels in some fields appear to be approaching the 2.0 per sweep threshold for alfalfa taller than 12 inches.

DEGREE DAYS JANUARY 1 - JULY 10

LOCATION	50°F	2012	NORM	48°F	40°F
Dubuque, IA	1240	1732	1334	1281	2047
Lone Rock	1197	1710	—	1226	1986
Beloit	1326	1785	1351	1334	2151
Madison	1190	1699	1285	1241	1974
Sullivan	1201	1679	1263	1244	1983
Juneau	1112	1619	—	1209	1875
Waukesha	1062	1507	—	1149	1811
Hartford	1028	1492	—	1118	1767
Racine	1014	1460	—	1109	1764
Milwaukee	991	1434	1151	1083	1727
Appleton	1021	1476	1204	1113	1736
Green Bay	946	1387	1118	1037	1656
Big Flats	1040	1524	—	1084	1758
Hancock	1048	1527	1251	1112	1761
Port Edwards	1004	1466	1218	1070	1698
La Crosse	1149	1680	1411	1170	1909
Eau Claire	1060	1509	1260	1121	1758
Cumberland	933	1286	1159	995	1580
Bayfield	633	1030	—	655	1173
Wausau	923	1311	1133	995	1572
Medford	943	1301	1030	1012	1597
Crivitz	876	1280	—	946	1539
Crandon	852	1161	891	895	1450

Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2013. NORMALS based on 30-year average daily temps, 1981-2010.

PEA APHID: Surveys in the southern, east-central and west-central districts found low aphid counts of less than four per sweep. Populations have declined since mid-June when counts of 6-8 per sweep were standard. The average this week was only 1.5 per sweep.

ALFALFA WEEVIL: A few late-stage larvae persist in the second crop, but most have pupated and new adults are appearing in sweep net collections. Larval populations have been reduced to less than one per 20 sweeps and no further problems are anticipated this year.

PLANT BUG: Mixed populations are still low at 0.1-1.5 per sweep in 12- to 30-inch alfalfa. Adults are more common than the nymphs, indicating reproduction has slowed for the time being.

CORN

EUROPEAN CORN BORER: Surveys conducted across

the southern two-thirds of the state since the last report found minor corn borer populations in 13 of 81 fields examined. A moderate infestation affecting 27% of plants was noted near Elk Mound in Dunn County, but in all other fields fewer than 17% of the plants were infested. Development of this insect has accelerated in the last two weeks and first generation larvae are entering the midribs of corn leaves. The treatment window has closed in the southern and west-central areas with the accumulation of 1,100 degree days (modified base 50°F).

TRUE ARMYWORM: Larvae are still fairly common in corn and many surveyed fields are showing 1-7% of plants with ragged leaves and defoliation. Continued scouting will be required throughout July since black light traps are registering locally heavy flights (301 moths at Janesville from June 26-July 10) and environmental conditions remain very favorable for armyworm outbreaks. One field in the Reedsburg area of Sauk County surveyed on July 2 had an infestation involving 34% of the plants, but insecticidal treatment was not needed since nearly all of the larvae had been parasitized. This observation suggests natural enemies are regulating populations in some fields and this should be considered when making treatment decisions.



True armyworm larva

Krista Hamilton DATCP

WESTERN BEAN CUTWORM: The first moth of the season appeared in a trap near Montello in Marquette County on July 3 and six more were registered in Columbia, Monroe, Trempealeau and Wood counties from July 4-10. The counts of 1-2 per trap represent the start of the adult flight period. According to the western bean cutworm phenology model, 25% emergence of the annual population should occur by 1,320 degree days (base 50°F), or July 11 near Beloit, July 16 near

Madison, July 23 near Eau Claire, and July 29 near Green Bay. 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 moth is trapped.

STALK BORER: Larval infestations are light in most corn fields, seldom exceeding 5%, and then primarily near field margins. A few individual fields in Fond du Lac and Monroe counties had injury rates of 10-20% in the first three edge rows, but significant damage was not expected since the plants were in the V7-V9 stages.



Stalk borer damage to corn

Krista Hamilton DATCP

SOYBEANS

SOYBEAN APHID: Counts remain low in most fields and moderate at a few sites. Soybeans surveyed from July 1-10 had densities of less than 25 per plant, with the exception of one Fond du Lac County field which had an average of 142 aphids per plant on 100% of the plants (based on examination of 20 plants per field). Due to the inconsistency in aphid pressure and the potential for colonies to increase abruptly as soybeans enter the early reproductive stages, repeated scouting will be necessary throughout July and early August.

JAPANESE BEETLE: This generalist defoliator is appearing in soybeans, corn and other crops. Beetle populations can vary greatly between the field interior and border rows, emphasizing the importance of thorough inspection of all areas of soybean and cornfields before making control decisions. Soybeans can usually tolerate substantial defoliation without reduction in yield potential, although treatment is justified for fields with defoliation

in excess of 30% prior to bloom and 20% between bloom and pod fill.

SEPTORIA BROWN SPOT: Soybeans in Sauk County are showing moderate symptoms of this foliar disease, favored by wet, humid conditions. Brown spot normally does not reduce plant growth or yield, and soybeans outgrow its effects in most years. The primary result of infection is premature defoliation of lower leaves. Foliar fungicides can provide some control in rare situations when an application is warranted.



Septoria brown spot on soybean

www.extension.umn.edu

FRUITS

APPLE MAGGOT: Emergence was reported from apple orchards in Mineral Point, Plymouth and Rosendale where 1-3 flies were captured on traps from July 4-10. The first apple maggot spray should be applied 7-10 days after the first fly appears on a yellow sticky trap and immediately if the fly is found on a red sphere, with later sprays following at 10- to 14-day intervals as long as flies are collecting on traps. As a reminder, the adult apple maggot differs from similar fruit flies by having an F-shaped band on the wings and a pronounced white thoracic spot. The economic threshold for apple maggot control is one fly per unenhanced trap per week or five flies per enhanced trap per week.

CODLING MOTH: The spring flight of moths declined in most orchards and continued at a few locations. The summer flight is expected to begin in the next 1-2 weeks. Apple growers are advised to check their records for the spring biofix to estimate the second biofix, which generally occurs 1,000 degree days (base 50°F) later in

a typical year. Approximately 800-950 degree days have accumulated since the first biofix was set in from May 19-29. In preparation for the summer flight, growers should replace pheromone lures and begin more frequent trap checks.

SOOTY BLOTCH AND FLYSPECK: Orchard IPM Specialist John Aue reports that leaf wetness hours are adequate for fungicide sprays to be applied for sooty blotch and flyspeck control. He notes that new research suggests relative humidity hours are a more reliable indicator of summer disease infection than leaf wetness hours, as previously thought. According to a new model, one hour at 90-95% humidity is equivalent to one leaf wetness hour and treatment is most effective when applied 175 leaf wetness hours beyond petal fall.

WOOLLY APPLE APHID: These insects are colonizing leaf axils, terminal shoots and water sprouts. A variety of beneficial insects, including syrphid flies, gall midge larvae and parasitic wasps, appear to be regulating populations so far, but weekly evaluations of aphid abundance and parasitism rates should be under way. John Aue notes that the available options for woolly apple aphid control (neonicotinoids, etc.) are costly and unreliable and that the preferred approach is to encourage beneficial insect populations.



Woolly apple aphid

Allen Chartier www.amazilia.net

JAPANESE BEETLE: Adults are emerging in southern and western Wisconsin and neonicotinoids or Neem oil spray to repel the beetles must be applied very soon, before local populations establish. Neem oil is appropriate and effective for organic systems when applied repeatedly. PyGanic dissipates quickly if applied during the day and is an organically acceptable method for immediate con-

tact control. A third option is kaolin clay (Surround WP) which could deter both Japanese beetle and apple maggots, although its efficacy against Japanese beetle is inconsistent.

SAN JOSE SCALE: First generation crawlers are settling and the “white cap” scales are appearing on fruits. Apple growers who did not tape scaffold branches earlier this season to monitor the crawlers should scout for the crawlers this weekend and consider implementing controls or flagging problem areas for more intense scouting when the second generation appears in August. Final treatment decisions must be made in the immediate future, while the bright yellow crawlers are still active.



San Jose scale crawlers

www.organicgardeninfo.com

VEGETABLES

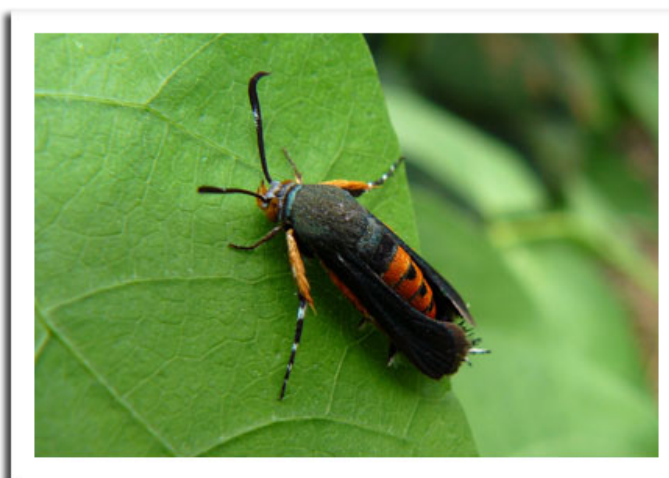
LATE BLIGHT: Three separate cases of late blight have been confirmed since June 28: two on commercial potato in Adams and Juneau counties and one on home garden tomato in Sauk County. Based on recent rain events and potential for spore dispersal, UW-Extension Plant Pathologist, Dr. Amanda Gevens is recommending preventative fungicide treatment of susceptible tomato and potato crops on a shortened 5- to 7-day spray interval. Scouting efforts should also be intensified, concentrating on field corners and areas sheltered by trees, where late blight symptoms first appear. Registered fungicides for potato late blight in Wisconsin are listed at the UW-Madison Vegetable Pathology website.

CORN EARWORM: The early migration of moths continued for the sixth week at the Green Lake, Janesville and Ripon monitoring sites, while the first

moths were registered near Wausau. Counts at Wausau and Janesville were low at 3 and 11 moths per trap, respectively, while the Ripon and Green Lake traps registered 29 and 105 moths from July 4-10. Larvae resulting from the flight have been found in corn in Dodge, Eau Claire, Green, Iowa and Sauk counties in the last two weeks although infestations are probably more widespread than indicated by our surveys. Cornfields should be checked regularly for this pest and treatment considered if 50% or more of the whorls are infested.

STRIPED CUCUMBER BEETLE: Home gardeners in the southwest and west-central areas are reporting minor damage to cucurbits. Treatment may be justified for infestations of 4-5 beetles per 50 plants.

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 some resistance.



Squash vine borer moth

[D. Charvat '10 flickr.com](http://D.Charvat'10.flickr.com)

NURSERY & FOREST

PEONY RED SPOT: Peonies at garden centers in Dane and Rock counties were infected with this fungal disease, characterized by small, circular, reddish or purplish leaf 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 can be controlled by cutting back plants to ground level in fall and destroying infected foliage. Fungicides are also an effective 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 necessary.



Red spot on peony leaves

Liz Meils DATCP

YELLOWHEADED SPRUCE SAWFLY: Nursery inspections in the past week found the larvae of this species feeding on Black Hills spruce in Washburn County. The olive green larvae with six gray-green dorsal and lateral stripes are gregarious feeders that quickly consume the needles of infested white, black and blue spruce, sometimes killing trees after 3-4 years of consecutive defoliation.



Yellowheaded spruce sawfly larva R. MacNeil Canadian Forest Service

Feeding occurs for a period of 4-6 weeks and usually subsides by mid-July as the larvae mature. Insecticidal soaps directed against the young larvae will usually give

reasonable control if applied as soon as they are noticed. Severe infestations of older larvae may require a residual insecticide spray.

LEAF BLISTER MITE: Leaf blisters caused by this mite were observed on crabapple and Luscious pear at nurseries in Marquette and Polk counties. The blisters, which form on the surface of leaves and fruits, develop in response to feeding by adult female mites and their young nymphs. Severe blister mite infestations can cause indirect damage such as reduced shoot growth and early leaf drop, while direct feeding on the fruits results in scarring that may render fruits unmarketable. Although most Wisconsin orchards and nurseries with integrated pest management programs seldom experience serious blister mite infestations, these arthropods can be controlled by treating trees in fall, as adult females are migrating from the blisters to the terminal buds to overwinter. It is not known exactly how the mites spread from tree to tree, but dispersal by wind, birds and insects is suspected.



Pear leaf blister mite blisters and necrotic tissue www.omafra.gov.on.ca

APPLE INSECT & BLACK LIGHT TRAP COUNTS JULY 4 - 10

COUNTY	SITE	STLM ¹	RBLR ²	CM ³	OBLR ⁴	AM RED ⁵	YELLOW ⁶
Bayfield	Keystone	0	0	0	5	0	0
Bayfield	Oriente	8	1	0	—	—	—
Brown	Oneida	150	9	9	13	0	0
Columbia	Rio	5	—	4	0	0	0
Crawford	Gays Mills	488	7	0	1	0	0
Dane	Deerfield	20	11	0	1	0	0
Dane	McFarland	0	0	3	0	0	0
Dane	Mt. Horeb	400	31	0	1	0	0
Dane	Stoughton	219	45	18	0	0	0
Dane	West Madison	66	27	7	0	0	—
Fond du Lac	Campbellsport	200	13	0	8	0	0
Fond du Lac	Malone	95	50	5	3	0	0
Fond du Lac	Rosendale	37	42	3	2	2	0
Green	Brodhead	25	15	3	6	0	0
Iowa	Mineral Point	375	63	7	2	0	*1
Jackson	Hixton	20	0	0	1	0	0
Kenosha	Burlington	275	43	0	9	0	0
Marathon	Edgar	—	—	—	—	—	—
Marinette	Niagara	53	0	3	22	—	—
Marquette	Montello	52	0	0	5	0	0
Ozaukee	Mequon	—	—	—	—	—	—
Pierce	Beldenville	324	241	21	0	0	0
Pierce	Spring Valley	41	5	5	2	0	0
Polk	Turtle Lake	238	5	6	2	0	0
Racine	Raymond	258	46	1	19	0	0
Racine	Rochester	266	22	3	2	0	—
Richland	Hillpoint	360	17	4.5	22	0	0
Sheboygan	Plymouth	550	12	7	20	**3	0
Walworth	East Troy	25	1	1	0	—	—
Walworth	Elkhorn	32	3	0	0	0	0
Waukesha	New Berlin	99	16	11	8	0	0

¹Spotted tentiform leafminer; ²Redbanded leafroller; ³Codling moth; ⁴Obliquebanded leafroller; ⁵Apple maggot red ball; ⁶Unbaited AM trap; ^{**}Baited AM trap; ^{*}Apple 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	7	0	0	0	0	0	0	0	0	0
Columbia	Arlington	1	0	0	0	0	0	2	0	0	0
Crawford	Prairie du Chien	0	1	0	0	0	0	0	0	0	0
Dane	Mazomanie	0	7	0	0	0	0	0	0	0	0
Fond du Lac	Ripon	2	0	0	0	0	2	0	0	0	0
Manitowoc	Manitowoc	0	16	0	0	0	0	0	0	0	0
Marathon	Wausau	0	13	0	4	0	0	8	0	0	0
Monroe	Sparta	0	1	0	0	0	0	0	6	2	0
Portage	Plover	2	1	0	0	0	0	0	0	0	0
Rock	Janesville	0	26	0	0	0	0	7	0	5	0
Walworth	East Troy	2	5	2	0	0	0	1	0	1	0
Wood	Marshfield	7	22	0	3	0	1	9	1	0	0

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