

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

Showers and thunderstorms early in the week brought heavy and much-needed rain to the state. Straight-line wind gusts associated with the storms flattened corn fields from Dodgeville to Milwaukee, uprooted trees, and caused power failures throughout the southeast, primarily in Kenosha, Milwaukee, Racine and Waukesha counties. Mostly drier weather followed, which gave way to a return of scattered, light rainfall by Thursday. The added moisture benefited reproductive soybeans and corn, as well as oats, peas and third crop alfalfa regrowth. Condition ratings for corn and soybeans were 78% and 75% good to excellent, respectively, as of July 10. Alfalfa harvesting increased to 53% at the start of the week, six percentage points ahead of last year and nine points ahead of the five-year average.

LOOKING AHEAD

SOYBEAN APHID: The first economic infestations of the year may develop in the week ahead. Surveys indicate that populations have increased to moderate levels in a very small percentage of fields. Some sites in Columbia and Sauk counties contained densities of 105-203 aphids per plant (on 50-100% of the plants), although the typical average is 12 per plant. Historically, the first economic populations of 250 or more aphids per plant have been

detected by the third week of July. This insect requires continual observation from now until the late reproductive stages of soybean growth in August.

WESTERN BEAN CUTWORM: The annual flight is gradually accelerating across south-central and central Wisconsin. Pheromone and black light traps registered activity at 6% of 169 sites in the past week, with a high count of 11 moths near Sparta in Monroe County. Moth emergence is now 10-25% complete in the southern half of the state. Egg deposition on corn and dry beans is underway at advanced locations.

WHITE MOLD: This soybean fungal disease could become severe in fields where soil moisture is high and temperatures remain below 85°F. Early canopy closure, high relative humidity and surplus soil moisture all favor its development, especially when these conditions occur during the two weeks prior to peak flowering. Scouting at canopy closure for tan, mushroom-like apothecia on the soil surface is recommended.

EUROPEAN CORN BORER: Pupation of the first generation has begun. Moths of the summer flight could appear in back light trap collections by July 15. Most of the larval population is in the intermediate (second to fourth) instars. In the north-central and northwest areas, black light traps continue to register low to moderate numbers of spring moths. The optimal treatment window

for first generation larvae, which extends from 800-1,100 degree days (base 50°F), has closed throughout much of the state, with the exception of the far southeastern and northern areas.

CORN ROOTWORM: Beetles of the western species were noted in Dane, La Crosse and Monroe counties in the past week. Surveys yielded very low counts of 1-2 beetles per 50 plants in 4 of 29 corn fields checked. The first northern corn rootworm adults of the season were observed on July 12. Peak emergence of the adult population remains about 2-4 weeks away. If lodging occurs this month, corn growers should closely examine the roots to determine if the cause was feeding by rootworm larvae, poorly developed root systems, or another factor.



Western corn rootworm beetles extension.entm.purdue.edu

FORAGES

ALFALFA WEEVIL: Larval counts in second crop alfalfa are now less than 0.2 per sweep in the east-central and northern areas, and no further problems are anticipated this year. Pupation has begun statewide.

POTATO LEAFHOPPER: Surveys have documented a general population increase since the last report, but counts remain below economic levels. The average in 53 fields sampled as far north as New Auburn in Chippewa County was 0.5 per sweep, with a range of 0.1-1.8. Additional fields have developed moderate counts of 1.5 or more per sweep, but harvesting of the second crop should reduce egg and nymph numbers and disrupt the population growth cycle. Effective management of this pest requires sampling on a weekly basis through mid-to late August.

DEGREE DAYS JANUARY 1 - JULY 13

LOCATION	50°F	2010	NORM	48°F	40°F
Dubuque, IA	1396	1589	—	1294	2330
Lone Rock	1340	1547	—	1223	2256
Beloit	1409	1677	—	1284	2351
Madison	1276	1524	1347	1189	2165
Sullivan	1273	1578	1363	1188	2159
Juneau	1206	1500	—	1129	2059
Waukesha	1096	1416	—	1108	1925
Hartford	1086	1383	—	1105	1895
Racine	1010	1359	—	1035	1824
Milwaukee	1003	1320	1173	1035	1798
Appleton	1063	1371	1217	1063	1856
Green Bay	968	1241	1171	1032	1738
Big Flats	1117	1395	—	1084	1931
Hancock	1123	1420	1338	1064	1938
Port Edwards	1092	1358	1263	1055	1891
La Crosse	1289	1541	1460	1192	2192
Eau Claire	1166	1404	1307	1123	1998
Cumberland	1029	1269	1241	1014	1815
Bayfield	754	977	918	787	1444
Wausau	1023	1249	1184	1011	1780
Medford	1123	1247	1066	1064	1938
Crivitz	914	1191	—	951	1659
Crandon	894	1138	977	887	1604

*Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2011.
NORMALS based on 30-year average daily temps, 1971-2001.*

PLANT BUG: Numbers in alfalfa are standard for this time of year, although apple and strawberry growers are reporting significant pressure by the tarnished plant bug species. Counts of adults and nymphs in the second alfalfa crop vary from 0.1-3.2 per sweep. The average is 1.6 per sweep in the west-central area, 1.3 in the east-central area and 1.9 in the northwest. Populations are much lower, less than 0.7 per sweep, in third crop regrowth in the southern counties.

CORN

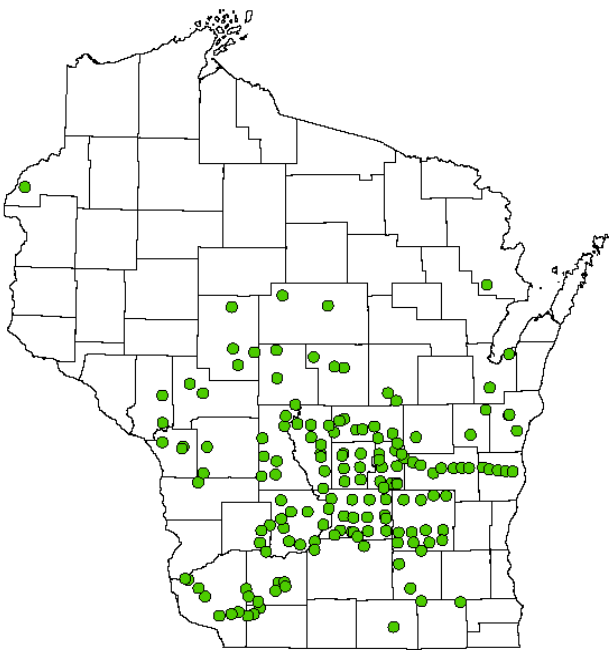
EUROPEAN CORN BORER: Pupation has begun in advanced areas of the state. Most first generation larvae are in the third and fourth instars, but development is variable. European corn borers in the east-central and northern areas are still in the early larval stages. Infestation rates in Chippewa, Eau Claire, Jefferson, Ozaukee, Rock, Sauk, Trempealeau and Walworth counties ranged from 1-19% in the past week. Seventy nine percent of

sampled fields showed no signs of larval infestation and were presumed to be Bt hybrids.

WESTERN BEAN CUTWORM: Below is a map showing the locations of 158 pheromone traps deployed as part of the annual trapping program. To date, one or more moths have been collected in 12% of the traps, as far north as Wood County. The high count for the period of July 8-14 was 11 in the black light trap near Sparta in Monroe County.

Close inspection of corn fields for egg masses and small larvae should begin at this time. The eggs are deposited in groups of 5-200 on the upper leaf surface of the upper one-third of plants, and the larvae can be found in developing tassels. An economic threshold of 5% infestation for field corn and 4% infestation for sweet corn is recommended by the University of Wisconsin. Controls applied at 90-95% tassel emergence are most effective.

2011 Western Bean Cutworm Traps



Wisconsin Department of Agriculture, Trade and Consumer Protection



STALK BORER: Larvae ranging in size from ¾-1¼ inches were noted to have caused extensive damage to the peripheral rows of corn at a few sites in Chippewa, Columbia, Eau Claire and Trempealeau counties. In one Chippewa County field, 56% of plants in the first row and 31% in the second and third rows were severely damaged. Spot treatment is no longer advised now that larvae have bored

into the stalks and unemerged tassels and most corn is beyond the V7 growth stage.

SOYBEANS

JAPANESE BEETLE: Defoliation has been observed in soybeans in Chippewa, Eau Claire, Grant, Jefferson, Richland, Rock, Sauk, Vernon and Walworth counties since early July. The degree of injury is low in most instances and moderate in a few fields. Numbers of this insect can vary greatly between the field interior and border rows, emphasizing the importance of thorough inspection of all areas of fields before making control decisions. Soybeans can usually tolerate substantial defoliation without reduction in yield.



Japanese beetle

Krista Hamilton DATCP

SOYBEAN APHID: Densities remain low to moderate and have not exceeded economic levels, but aphid pressure is increasing in the southern areas. Average counts were below 20 aphids per plant in all but one soybean field examined in the past week. The exceptional field, east of Sauk City, had an average of 203 aphids per plant on 100% of the plants, which is still less than the economic threshold of 250 per plant. Only 6% of 33 sampled fields had 21-202 aphids per plant, 83% had 1-20 per plant, and 27% had no aphids. Chemical treatment has not been justified for any field surveyed as of July 13, but this may change by late July or early August. Scouting to assess aphid densities should begin next week.

SMALL GRAINS

STRIPE RUST: The aecial and pycnial stages of this rust were detected on several containerized 'Emerald

Carousel' and 'Golden Carousel' barberry plants at nurseries in Door, Douglas, Sheboygan, St. Croix and Taylor counties last month. Laboratory testing found the barberries to be infected with stripe rust (*Puccinia striiformis*). Based upon the cultivars affected, the stripe rust was presumed to be the form species that attacks Kentucky blue grass rather than the form that infects wheat.

Common barberry is the alternate host of black stem rust (*Puccinia graminis*), an economically and historically significant wheat disease. The ornamental barberry varieties offered for sale at nurseries have undergone testing to ensure resistance to black stem rust. Thus, the recent rust detections have raised concerns about potential resistance failure or the emergence of new and more virulent strains of black stem rust.

Barberry is an alternate host of several cereal rusts, most of which can only be distinguished by laboratory testing. Crop advisors and growers are asked to report cases of rust on barberry to the DATCP Plant Pathologist or a county agent for identification. At this time of year, barberries are no longer producing the characteristic orange-yellow spores.



Stripe rust on barberry

Anette Phibbs DATCP

FRUITS

APPLE MAGGOT: Emergence of flies continued in the past week and oviposition on apples is well underway. Apple orchards affected by recent hail storms are at increased risk of infestation by this pest since hail-damaged fruits release volatiles that can attract flies from long distances. The high count for the last reporting period was 18 flies on a baited yellow sticky trap at

Stoughton in Dane County. Apple maggot traps should be cleaned of non-pest flies periodically and recoated with insect sticky trap material if necessary.



Apple maggot yellow sticky trap

omafra.gov.on.ca

CODLING MOTH: The first flight has ended at most locations and the summer flight is anticipated 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. Approximately 800-1,100 degree days have accumulated in most Wisconsin orchards since the first biofix. In preparation for the summer flight, growers should replace pheromone lures and begin more frequent trap checks.

JAPANESE BEETLE: Levels are increasing in fruit and field crops over much of the state, particularly in the south-central and southeastern counties. Reports and observations suggest this beetle could be a more serious problem this year than in the last 2-3 seasons. Spot treatment of individual trees may be warranted for orchards that experience problems. In Kenosha County, neem oil was applied to 'Honeycrisp' apple trees and grapes in one orchard.

REDBANDED LEAFROLLER: Second generation larvae are appearing in terminals. Hatch of this species and the obliquebanded leafroller has overlapped this season and both leafrollers are present at the same time in many orchards. Growers concerned about leafrollers should begin scouting for larvae in terminals and around fruits.

EUROPEAN RED MITE: Outbreaks of this mite are a distinct possibility in orchards where conditions have become increasingly dry this month. Trees exhibiting light bronzing should be inspected for adult females on the

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.

VEGETABLES

COLORADO POTATO BEETLE: The summer generation of beetles is expected to begin appearing in potatoes next week. Pupation occurs in 7-10 days at this time of year and larval development also proceeds much more rapidly than in spring. Summer beetles and all second generation larval stages are considered damaging.



Colorado potato beetle

Phillippe_Boissel flickr.com

CORN EARWORM: Nine specimens were captured in the pheromone trap at Wausau and six were reported from Hancock during the last monitoring period. The major migration could begin in the next 2-4 weeks. Participants in the corn earworm trapping network should replace lures on a weekly basis beginning by July 20.

CABBAGE MAGGOT: Degree day accumulations are appropriate for egg laying in home gardens and larger cabbage plantings near Green Bay and Wausau. In Wisconsin, the second brood of larvae is usually not as damaging as the first.

POTATO LEAFHOPPER: Populations in vegetable crops have increased in the past two weeks as a result of warm temperatures and alfalfa harvest operations. Reports indicate that counts are approaching economic levels in a few potato and snap bean fields. Established economic thresholds are one per sweep or one nymph per 10 leaves in snap beans and three per sweep in potatoes, when nymphs are present.

WEEDS

GIANT RAGWEED: This annual broadleaf currently measures 20+ inches tall in soybeans where herbicides were applied late or earlier controls were ineffective. Field experiments have shown that interference from as few as two plants per 9 m² can reduce soybean yields by 46-50%, so these “escapes” are expected to cause some degree of yield reduction. Growers and crop consultants should make note of the location and density of giant ragweed escapes this month for improved control next season.

TEASEL: Cut-leaved and common teasel are in the early flowering stages in southern Wisconsin. Mowing plants to prevent seed formation is recommended at this time, although chemical controls applied to the rosettes in spring or fall are usually more successful in lowering populations. Since teasel plants commonly resprout and flower after mowing, repeated cutting is often required.



Common teasel

Clarissa Hammond DATCP

NURSERY & FOREST

GYPSY MOTH: Mating disruption treatments are near completion. Approximately 85,792 acres were treated in Burnett, Chippewa, Clark, Dunn, Eau Claire, Jackson and Sawyer counties from July 7-12. Treatment of selected areas in Bayfield, Douglas and Sawyer counties is scheduled for the end of this week. One final site in the Superior area will be treated on July 17.

BLACK KNOT: A light infection on Canadian red cherry trees was noted in Dane County. This common fungal

disease is characterized by irregular, black swollen galls or “knots” which form on branches and can range in size from ½ inch to one foot long. Shoots and branches with knots should be pruned in winter or early spring, before fungal spores are released. Multiple infections of black knot reduce vigor and eventually cause tree decline.



Black knot on red cherry

Liz Meils DATCP

JACKPINE BUDWORM: Levels of this insect are increasing in far northwestern Wisconsin. The population currently extends from the Gordon area of Douglas County northward, and could continue into Bayfield County this year. Browning and defoliation of jack pines is predicted for this region. Densities in Washburn County are much lower and no noticeable damage is expected in Oneida County and Vilas counties.

BALSAM FIR PESTS: The DNR Northern Region Forest Health Specialist reports that balsam firs from Taylor County to Florence County are exhibiting wilted new foliage, dead tips and other symptoms which can be attributed to one of the following: Armillaria root rot, Delphinella shoot blight, fungal canker disease, snow mold, spruce budworm, or pine sawyer beetles in the genus *Monoctonus*. The majority of symptomatic firs are thought to be infected with one of two fungal pathogens. The causal agents are currently being isolated by the DNR Forest Pathologist.

WHITE PINE WEEVIL: Colorado blue spruce trees at a nursery in Dane County were showing signs of white pine weevil infestation. Mid-July is the preferred time of year to scout pines and spruce for brown, wilted leaders, discolored needles on the top lateral growth, and other evidence of attack. This insect can be controlled by pruning out the infested area 6-10 inches below the

wilted leader before adults emerge in late July or early August. Pruned tops should be removed from fields and properly disposed of to prevent reinfestation.



Wilted spruce leader caused by white pine weevil Konnie Jerabek DATCP

ASH RUST: This rust disease is developing on green and white ash trees in a Dodge County nursery. Symptoms include bright orange swellings on the leaves, twigs and petioles, and distorted, necrotic or wilted leaves. The swellings develop in June and sporulate by July, at which time the spores disperse to cord grass, the alternate host which occurs in marshy areas. This rust can usually be tolerated by ash trees, so preventive fungicides are not recommended.



Ash rust on white ash

Clarissa Hammond DATCP

APPLE INSECT & BLACK LIGHT TRAP COUNTS JULY 7 - 13

COUNTY	SITE	STLM ¹	RBLR ²	CM ³	OBLR ⁴	OBLR ⁵	AM RED ⁶	YELLOW ⁷	GDD 50°F
Bayfield	Keystone	20	9	4	12	—	—	—	
Bayfield	Oriente	0	0	1	0	—	—	—	
Brown	Oneida	1280	51	21	22	—	—	—	
Chippewa	Chippewa Falls	0	54	12	5	2	0	0	
Columbia	Rio	61	35	2	2	—	0	0	
Dane	Deerfield	—	—	—	—	—	—	—	
Dane	Mt. Horeb	126	148	2	25	—	0	0	
Dane	McFarland	0	0	2	0	—	15	—	
Dane	Stoughton	158	20	4	3	0	*1	**18	1165
Dane	West Madison	43	22	9	4	—	*0	**10	
Fond du Lac	Campbellsport	72	65	0	46	—	0	0	
Fond du Lac	Malone	130	100	9	6	—	0	0	
Fond du Lac	Rosendale	—	—	—	—	—	—	—	
Grant	Sinsinawa	11	1	0	0	—	—	—	
Green	Brodhead	16	20	5	1	3	0	0	
Iowa	Mineral Point	295	180	0	9	0	0	0	1215
Jackson	Hixton	12	6	2	5	2	0	0	
Kenosha	Burlington	375	21	4	—	—	0	0	1025
Marinette	Niagara	47	0	18	19	—	0	0	850
Marquette	Montello	21	0	1	0	—	0	0	1192
Ozaukee	Mequon	60	13	5	—	—	*1	*0	1020
Pierce	Beldenville	324	81	14	1	9	*0	*1	
Pierce	Spring Valley	164	132	3	0	0	*0	*0	
Polk	Turtle Lake	357	35	2	4	—	0	0	
Racine	Raymond	380	135	27	2	—	0	0	
Racine	Rochester	270	156	10	16	—	0	0	
Richland	Hillpoint	520	37	4	6	0	0	0	
Sheboygan	Plymouth	125	43	1	29	—	**3	0	
Walworth	East Troy	40	20	0	3	—	0	0	
Walworth	Elkhorn	35	5	0	5	—	0	0	
Waukesha	New Berlin	50	49	18	8	—	0	0	

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	30	0	1	0	0	0	2	0	0	0
Columbia	Arlington	0	9	2	0	0	0	7	0	8	0
Dane	Mazomanie	0	1	1	0	0	0	0	2	3	0
Grant	Prairie du Chien	4	0	0	0	0	0	2	0	0	0
Manitowoc	Manitowoc	0	3	0	0	0	0	0	1	8	0
Marathon	Wausau	6	6	3	35	0	5	5	0	3	2
Monroe	Sparta	0	1	0	0	0	0	0	11	0	0
Rock	Janesville	0	6	3	0	0	0	4	0	14	0
Walworth	East Troy	0	0	1	0	0	0	0	3	14	0
Wood	Marshfield	53	28	7	21	0	2	48	0	6	1

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