

WISCONSIN PEST BULLETIN

Timely crop pest news, forecasts, and growing season conditions for Wisconsin



Wisconsin Department of Agriculture, Trade and Consumer Protection

Division of Agricultural Resource Management | Bureau of Plant Industry
2811 Agriculture Dr., Madison, WI 53718 • <http://pestbulletin.wisconsin.gov>

WEATHER & PESTS

Dry, sunny weather prevailed for much of the week, improving opportunities for fieldwork following last week's heavy rain. Alfalfa harvesting, orchard pest control and herbicide applications continued, while spring planting neared completion throughout Wisconsin. The planting pace of soybeans has been particularly rapid this season. Progress was six days ahead of the 5-year average and 22 days ahead of last year at the start of the week, with 96% of intended soybean acres sown. Abundant June heat and moisture have benefited plant development statewide and summer crop prospects are generally very favorable. The most advanced corn has reached the eight-leaf (V8) growth stage and soybeans should enter the beginning bloom stage by early July. Overall, 82% of the corn crop is rated in good to excellent condition, down four percentage points from last week, but 28 points higher than the same time last year.

LOOKING AHEAD

TRUE ARMYWORM: Caterpillars of various sizes are appearing in the perimeter rows of corn. Populations are currently below economically significant levels, but larvae may become locally abundant before the end of the month. Routine scouting of corn and wheat should begin in the week ahead.

EUROPEAN CORN BORER: Larvae produced by spring moths are hatching, and fresh whorl feeding injury by first-instar larvae is detectable in the tallest southern and western Wisconsin cornfields. The treatment window for first-generation corn borers has opened near Beloit and in other advanced areas of the state with the accumulation of 800 degree days (modified base 50°F).

EASTERN TENT CATERPILLAR: Pupation has started in warmer portions of southern Wisconsin where 725 degree days (modified base 50°F) have accumulated as of June 17. Emergence of the first adult moths is anticipated next week.

BLACK CUTWORM: The threat from this early-season pest has largely subsided, but isolated problems could develop in later planted corn. Scouting may be discontinued for fields that have reached the V5 stage.

WESTERN BEAN CUTWORM: Pheromone traps are now being set in preparation for the annual moth flight. Participants in the western bean cutworm monitoring program are asked to report counts to Tracy Schilder at tracy.schilder@wisconsin.gov by June 24 and each Wednesday through mid-August. The earliest western bean cutworm moths typically appear in traps during the last two weeks of June.

JAPANESE BEETLE: Sightings have been reported from two additional southern Wisconsin counties (Dane and

Rock) since the first beetles of the season were observed on June 10. Beetle emergence will increase over the next several weeks and peak in late July. Soil-applied insecticides to control this pest must be made 3-4 weeks in advance of emergence and are no longer advised for southern and central Wisconsin.



Japanese beetles

Krista Hamilton DATCO

FORAGES & GRAINS

ALFALFA WEEVIL: The peak larval damage period will end by late June (800 degree days base 48°F) as populations reach the non-feeding pupal stage. Weevil pressure has been low this spring. The average count in 120 first-crop alfalfa fields sampled from May 22-June 17 was just 0.09 per sweep (9 per 100 sweeps) and leaf tip feeding was less than 35% in all surveyed fields.

POTATO LEAFHOPPER: Recent alfalfa surveys found low averages varying from 0.02-0.3 per sweep, with the highest count (34 per 100 sweeps) observed in Iowa County. Nymphs, which can be an indicator of population increase, should begin appearing next week.

MEADOW SPITTLEBUG: Adults have been collected in alfalfa sweep net samples, signaling that the population has matured. Meadow spittlebug damage is rare but occasionally occurs on first-year alfalfa seeded into small grain stubble. This insect has a single generation per year in Wisconsin. The risk of damage ends once the adults emerge.

PEA APHID: This insect continues to be the most abundant alfalfa pest. Densities currently range from 2-11 per sweep and average three per sweep. After peaking in

DEGREE DAYS JANUARY 1 - JUNE 17

LOCATION	50°F	2019	NORM	40°F
Dubuque, IA	867	790	851	1573
Lone Rock	778	719	—	1441
Beloit	810	717	863	1494
Sullivan	709	638	792	1344
Madison	774	694	818	1433
Juneau	657	586	—	1256
Racine	602	524	—	1223
Waukesha	668	593	—	1288
Milwaukee	615	540	690	1231
Hartford	626	575	—	1215
Appleton	639	520	—	1218
Green Bay	596	493	688	1152
Big Flats	682	568	—	1282
Hancock	625	527	800	1198
Port Edwards	649	534	777	1226
La Crosse	778	649	904	1432
Eau Claire	782	611	800	1410
Cumberland	586	498	719	1112
Bayfield	489	358	—	966
Wausau	526	449	705	1044
Medford	527	456	634	1046
Crivitz	569	476	—	1079
Crandon	502	434	560	979

Method: Modified B50; Modified B40 as of January 1, 2020. NORMALS based on 30-year average daily temps, 1981-2010.

early to mid-June, pea aphid populations often collapse due to natural controls such as lady beetles, damsel bugs, parasitic wasps, and fungal pathogens.

CORN

EUROPEAN CORN BORER: Moth emergence continued for the third consecutive week and is expected to peak next week in areas north of Stevens Point. The spring flight has already peaked across the south-central and southwestern regions. Moths are being captured in low numbers in black light traps and the characteristic shot-hole feeding by newly-hatched first-instar larvae should be noticeable in the tallest cornfields in the week ahead.

STALK BORER: Scouting should be underway for this mid-season corn pest. Surveys from Adams County south to Walworth County found approximately 58% of fields with some degree of infestation in the first four perimeter rows. Damage was mostly light and less than 5% of plants were

injured, although isolated fields in Dane, Jefferson, Rock and Sauk counties had infestations affecting 13-28% of the edge row plants. The larvae at these sites had tunneled into the developing corn stalks and were no longer susceptible to foliar insecticides. Stalk borer larvae cannot be controlled once they have burrowed into the stalk and treatment after V7 is not effective.



Stalk borer larva

Randy Wendler DATCP

TRUE ARMYWORM: Non-economic larval infestations affecting 1-4% of corn plants were recorded at 20% of fields surveyed in the past week. Increased scouting is recommended through the end of the month.



True armyworm larva

Randy Wendler DATCP

ROSE CHAFER: Light defoliation caused by this beetle was encountered in Crawford, La Crosse and Richland County corn. Less than 1-2% of plants showed minor feeding, although up to 5-6 beetles were noted on individual plants. The rose chafer flight period extends until mid-July, with the heaviest beetle pressure typically oc-

curing in fields on sandy soils. Control of this insect in corn is usually not warranted.

CORN ROOTWORM: Peak hatch of overwintered eggs is beginning in southwestern Wisconsin. This event occurs from 684-767 degree days (base 52°F), which is equivalent to 5-6 calendar days. Egg hatch should peak statewide during the final week of June and first week of July this year. Assessing larval rootworm injury is advised next month for continuous corn that has historically had pressure or if Bt-trait performance issues are suspected. Submerging the roots in a bucket of salty water (i.e., float test) or digging up plants and breaking apart the soil around the root system are two methods for confirming rootworm feeding.

SOYBEANS

SOYBEAN APHID: Colonies are appearing gradually in soybean fields this season and have been found so far in Grant, La Crosse, Lafayette and Richland counties. Only six of the 49 (12%) fields surveyed in the past week had detectable populations.



Soybean aphid

Randy Wendler DATCP

Average fieldwide densities were below one aphid per plant based on examination of 100 plants per field, with the week's highest total count of 96 aphids per 100 plants found in Dodge County. Aphid dispersal to soybeans will increase this month and routine sampling is recommended beginning in early July.

ROSE CHAFER: Light feeding damage has been noted in soybean fields on sandy soils in the southern half of the state. Although this insect can be abundant in some

years, the window for activity is brief and lasts just 3-4 weeks. Defoliation caused solely by the rose chafer rarely exceeds the 30% threshold for pre-bloom soybeans before beetle activity subsides in July.



Rose chafers feeding on soybeans

Randy Wendler DATCP

BEAN LEAF BEETLE: Surveys indicate that defoliation associated with this beetle is common, though not particularly severe. The distinctive circular holes made by overwintered adults were noted in approximately 43% of the fields sampled June 11-17. Leaf feeding was very minor (affecting <10% of plants). Bean leaf beetle (BLB) has become more prevalent in the state in the last 20 years, but has to date been a low-impact pest. Economic soybean damage directly resulting from BLB has never been documented by DATCP surveys.

FRUITS

ROSE CHAFER: This generalist pest is appearing in vineyards and orchards. Scouting twice weekly is advised for sites on sandy soils and those with a history of rose chafer problems once the first beetle is observed. An average of two beetles per vine has been suggested as the basis for initiating controls, although the feeding period is usually brief (<3 weeks) and the beetles usually disappear by July without causing significant damage. Commercially available traps can attract beetles from surrounding areas and are not recommended for use in vineyards.

SAN JOSE SCALE: Monitoring for crawlers should begin now in known orchard hotspots, by applying black electrical tape to infested scaffold branches. The tape must be wrapped adhesive side-down, with a thin layer of

petroleum jelly applied to the non-sticky outer side. Concentrate taping on younger limbs (2-3 inches in diameter) in blocks with a history of SJS damage. A 10x hand lens is required to view the oval, bright-yellow crawlers. A capture of 10-15 crawlers in a few days, or 10 crawlers on one tape, may warrant control.



San Jose scale on plum

Elizabeth Wahle ipm.illinois.edu

CODLING MOTH: Trap counts remain high at some sites. Economic captures of five or more moths per trap per week were reported from 9 of 29 cooperating locations (31%) from June 11-17. Apple growers are advised to continue monitoring degree days and CM counts until 650-700 units (modified base 50°F) have accumulated from the spring biofix to determine if additional late flights require treatment. Orchards that recorded biofix on May 24 have accumulated about 350-475 degree days. Locations with a later June 1 biofix are at 250-350 degree days. Signs of fruit damage are becoming apparent, and scouting fruits for tiny, circular entry wounds is advised.



Codling moth entries

Shawn Steffan Utah State Extension

APPLE MAGGOT: Emergence of flies from the soil could begin in advanced locations before the end of the month. This annual event corresponds with the accumulation of 900 degree days (modified base 50°F) when soil moisture is appropriate. Apple maggot traps should be placed next week in perimeter trees adjacent to abandoned orchards or woodlots to capture the earliest flies.



Apple maggot fly

Werner Eigelsreiter bugguide.net

SPOTTED WING DROSOPHILA: The first SWD flies are likely emerging from wild hosts. Earliest first capture dates for SWD in Wisconsin have ranged from June 1 in 2018 to June 19 last season. Berry growers should intensify monitoring and scouting efforts at this time, and prepare to implement SWD treatment programs.



Spotted wing drosophila males and female flies

Krista Hamilton DATCP

Commercial SWD traps and lures are available through Great Lakes IPM, or growers can make their own traps using a clear plastic deli container baited with either a yeast-sugar mix (one tablespoon of active dry yeast plus four tablespoons of sugar dissolved in 12 ounces of

water) or apple cider vinegar. A few drops of unscented dish soap should be added to the homemade traps to break the surface tension and kill the flies.

REDBANDED LEAFROLLER: Moth counts are expected to increase again by early July as the second flight starts. Minimal RBLR activity was noted again this week, with average counts varying from 0-10 moths per trap and averaging only two per trap.

VEGETABLES

SQUASH VINE BORER: Moth emergence should begin next week in warm southern Wisconsin locations. Close inspection of pumpkins, squash, gourds, and other vine crops for eggs and evidence of larval boring is advised once 900 degree days (simple base 50°F) have been reached. If insecticide use is warranted for SVB control, materials must be applied before the larvae bore into vines and become protected by vine tissue. Applying treatments while runners are shorter than two feet long is most effective.



Squash vine borer moth

Krista Hamilton DATCP

POTATO LEAFHOPPER: Populations are likely building in vegetable hosts such as snap beans and potatoes, spurred by the recent heat. Commercial vegetable growers may use an insect sweep net to monitor fields, taking 25 sweeps per sample site and sampling from at least five sites per 30 acres. The protocol for gardens or smaller-acreage farms involves counting nymphs and adults by turning over leaves from the middle of 25 plants.

Recommended treatment thresholds for potatoes are one adult per net sweep or an average of 2.5 nymphs and

adults on the undersides of 25 potato leaves. In snap beans, the threshold is 0.5 adults and nymphs per sweep for seedlings, and one leafhopper per sweep for larger plants in the third trifoliate to bud stages.



Potato leafhopper nymph

Krista Hamilton DATCP

IMPORTED CABBAGEWORM: Damage caused by larger cabbageworms has become very conspicuous, making the velvety green caterpillars generally easy to find and remove from gardens and smaller plantings. For larger commercial cabbage crops where chemical control may be warranted, ICW populations should be assessed weekly by examining 25-50 randomly selected plants (depending upon field size) and recording the number of infested plants. A plant is infested if eggs or caterpillars are found.



Imported cabbageworm larva

www.mobot.org

Control decisions are made based on a threshold of 30% infestation in the transplant to cupping stages; 20% infestation from the cupping to early head stages; and

10% from early heading until harvest. For broccoli and cauliflower, the threshold decreases to 10% once flowers or curds begin to develop, to maintain quality.

COLORADO POTATO BEETLE: First-generation larvae are predominantly in the early instars in southern and central Wisconsin. Populations of overwintered beetles have been noticeably high this spring and heavy larval infestations are anticipated. Control using Btt (*Bacillus thuringiensis* subsp. *tenebrionis*) or other materials will be most effective if applied soon, while the majority of larvae are still small.



Newly hatched Colorado potato beetle larvae

Tracy Schilder DATCP

NURSERY & FOREST

MISLABELED NURSERY PLANTS: DATCP nursery inspectors not only monitor plant stock to ensure that it is healthy and free from insect pests and diseases, they also inspect labeling for accuracy. This includes checking the hardiness zone rating and whether a plant is properly labeled as an annual or perennial. It is not unusual for inspectors to find annual plants misrepresented as perennials. A common example is the Calla Lily, which should not be considered perennial nursery stock, defined by Wisconsin Statute 94.10(7) as "any plant that can survive a Wisconsin winter outdoors."

Retailers selling mislabeled plants are issued an enforcement notice mandating the plants be removed from sale until the issue is resolved. Correcting a label can be done by placing an "Annual" sticker over the word "Perennial," or even by crossing off "Perennial" with a marker and writing the word "Annual." All signage must be corrected and the plants must be displayed in the

designated “Annuals” or “Perennials” section of the sales area. DATCP recommends that impacted nurseries forward enforcement notices up the supply chain so that the inaccurate labeling issue can be corrected in future shipments to Wisconsin retailers.

PLANT RUSTS: A range of plant rusts have been observed by inspectors this month. Elderberry rust was noted at a Vernon County nursery on the varieties “Black Beauty” and “Black Lace.” Caused by the fungus *Puccinia sambuci*, this rust alternates between elderberry and at least twelve species of sedge. Symptoms include bright orange lesions that appear on the upper side of elderberry leaves, with heavy infection causing stem distortion such as bending and curling during the summer months.

This rust is not lethal but it does reduce fruit yield and impacts plant growth. By late summer, irregular brown rust spots with yellow halos become visible on leaves of nearby sedge plants.



Elderberry rust

Tim Boyle DATCP

Another recently observed rust disease, crown rust, was found on “Fine-line” and common buckthorn in southwestern Wisconsin. Buckthorn is the alternate host and an important inoculum source for this most widespread and damaging disease of oats in the Midwest.

Orange rust, caused by the fungus *Gymnoconia nitens*, was observed by inspectors on wild blackberry foliage in Trempealeau County. Conspicuous symptoms are the thick, powdery orange blisters on the leaf undersides. The fungus is systemic and overwinters in the crown and roots of infected plants, leading to the production of new infected canes every year. Diseased plants often have masses of spindly shoots arising from one bud that give

the plant a bushy appearance. Orange rust does not usually kill plants, but it will infect more plants in a field each year and can significantly reduce vegetative growth and yield.



Orange rust on wild blackberry

Tim Boyle DATCP

DEFINITE-MARKED TUSSOCK MOTH: Small larvae were feeding on ‘Sageleaf’ willow shrubs at a nursery in Polk County. The colorful, yellow-tufted caterpillars also infest apple, ash, basswood, birches, boxelder, cherry, elm, maple, and oak, though heavy populations are uncommon. Handling is discouraged since the hairs of caterpillars in this genus are known to cause skin irritation.



Definite-marked tussock moth larva

Konnie Jerabek DATCP

APPLE INSECT & BLACK LIGHT TRAP COUNTS JUNE 11 - 17

COUNTY	SITE	STLM ¹	RBLR ²	CM ³	OBLR ⁴	DWB ⁵	LPTB ⁶	BMSB ⁷	AM RED ⁸	YELLOW ⁹
Bayfield	Keystone	7	5	0	0	5	0			
Bayfield	Orienta	4	0	0	0	0	0	—		
Brown	Oneida	0	0	5	14	5	4	0		
Columbia	Rio	160	0	5	4	—	4			
Crawford	Gays Mills	38	1	1 MD	1	—	7			
Dane	Mt. Horeb	2	0	1	3	—	0	0		
Dane	McFarland	0	5	15	0	—	11			
Dane	Stoughton	18	0	5	12	0	5	0		
Fond du Lac	Campbellsport	8	10	0	0	25	—			
Fond du Lac	Malone	1	0	3	3	—	15	0		
Fond du Lac	Rosendale	8	5	1	2	4	7	0		
Green	Brodhead	0	0	3	4	—	0			
Iowa	Mineral Point	47	0	15 MD	0	—	21	0		
Jackson	Hixton	12	7	9	2	—	9			
Kenosha	Burlington	2	0	2	11	1	12	0		
Lafayette	Belmont	10	0	3 MD	1	—	11			
Marathon	Edgar	15	1	3	1	—	19	0		
Marinette	Niagara	0	0	0 MD	0	—	2			
Marquette	Montello	2	7	0	2	—	17			
Ozaukee	Mequon	0	0	1	0	—	1	0		
Pierce	Beldenville	6	1	6	0	0	2			
Pierce	Spring Valley	10	2	0 MD	1	0	0			
Racine	Raymond	1	0	2	0	—	3			
Racine	Rochester	0	0	5	0	3	1			
Richland	Hill Point	19	0	13	9	—	7	0		
Sheboygan	Plymouth	0	0	0 MD	0	—	0			
Walworth	East Troy	3	0	0 MD	13	0	15			
Walworth	Elkhorn	6	5	0 MD	8	0	2			
Waukesha	New Berlin	7	0	0	2	—	1			

¹Spotted tentiform leafminer; ²Redbanded leafroller; ³Codling moth; ⁴Obliquebanded leafroller; ⁵Lesser peachtree borer; ⁶Dogwood borer; ⁷Brown marmorated stink bug; ⁸Apple maggot red ball; ⁹Apple maggot yellow board.

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	0	0	0	0	0	1	14	0	0
Columbia	Pardeeville	—	—	—	—	—	—	—	—	—	—
Dodge	Beaver Dam	0	0	1	0	0	0	7	0	0	0
Fond du Lac	Ripon	0	0	1	0	0	0	9	4	0	0
Grant	Prairie du Chien	0	0	0	0	0	0	0	0	0	0
Langlade	Antigo	0	0	0	0	0	0	0	19	0	0
Manitowoc	Manitowoc	0	0	0	0	0	0	4	6	0	0
Marathon	Wausau	0	0	0	0	0	0	27	10	0	0
Monroe	Sparta	0	0	0	0	4	2	17	0	0	0
Rock	Janesville	0	0	0	0	5	0	0	3	0	0
Walworth	East Troy	—	—	—	—	—	—	—	—	—	—
Waushara	Hancock	0	—	—	—	0	—	—	—	—	0
Wood	Marshfield	0	0	0	0	0	0	12	9	2	0

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