

Wisconsin Department of Agriculture, Trade & Consumer Protection

Wisconsin Pest Bulletin

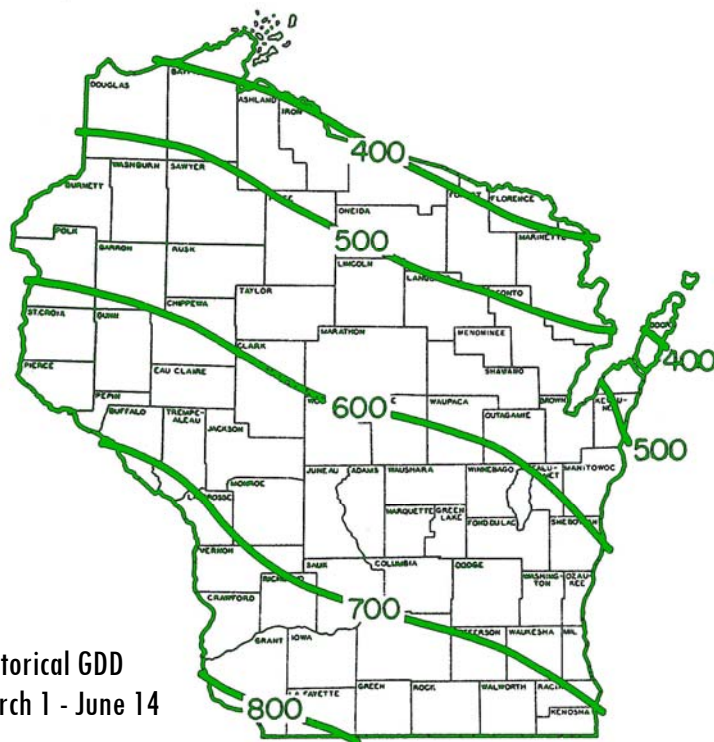
PO Box 8911 • Madison, WI 53718 • Phone 1-800-462-2803 • Fax: 608-224-4656

Your weekly source for crop pest news, first alerts, and growing season conditions for Wisconsin



Weather and Pests

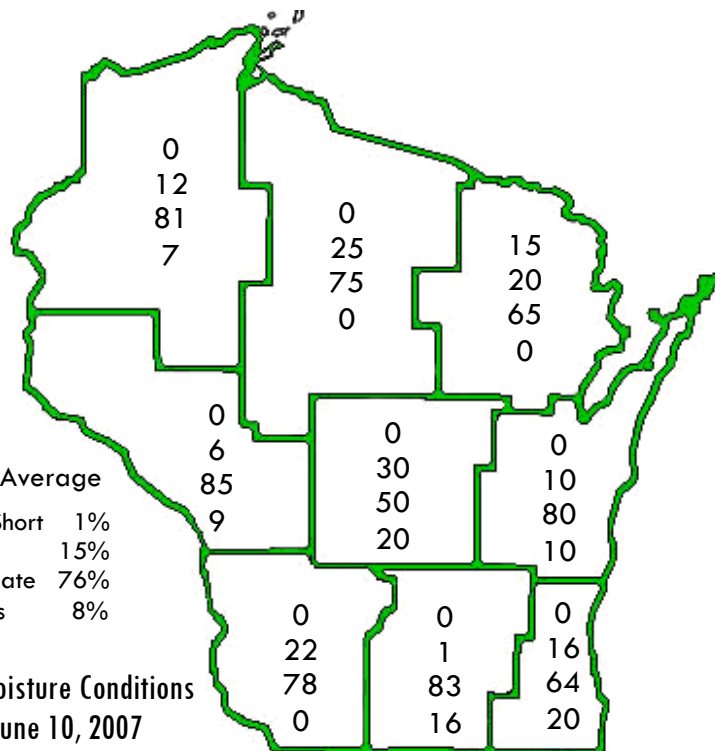
The weather in the past week was hot and humid with sunshine, clear skies with high temperatures in the upper 80s. The season remains 5-8 days ahead of last year and crops continue to progress remarkably well. Corn has developed to a record average height of 11 inches, above the 2006 average of 8 inches and the previous record of 10 inches set in 1998. Soybeans are also emerging at a record rate. High temperatures combined with no rainfall have been ideal for reproduction of potato leafhoppers and activity of many night-flying insects. Pest pressure has intensified, and this may increase the risk of damage to crops on light or sandy soils. The extended forecast calls for more hot, sunny days with no chance of measurable precipitation until early next week.



Historical GDD
March 1 - June 14

Growing Degree Days through 06/14/07 were

	GDD 50F	2006	5-Yr	48F	40F
Dubuque, IA	928	741	807	972	1624
Lone Rock	881	711	768	904	1546
Beloit	903	781	801	926	1587
Madison	834	676	735	872	1492
Sullivan	803	701	736	810	1441
Juneau	791	642	702	822	1429
Waukesha	767	624	673	803	1400
Hartford	775	618	662	814	1408
Racine	723	566	605	750	1346
Milwaukee	726	578	601	765	1350
Appleton	752	631	621	782	1351
Green Bay	668	550	538	702	1263
Big Flats	796	691	703	796	1398
Hancock	775	674	679	764	1351
Port Edwards	774	695	663	785	1367
La Crosse	935	801	797	944	1627
Eau Claire	835	776	723	859	1475
Cumberland	768	672	617	772	1359
Bayfield	538	448	410	544	1043
Wausau	706	604	586	716	1263
Medford	690	616	568	703	1250
Crivitz	646	544	515	668	1197
Crandon	637	539	519	636	1151



State Average

Very Short 1%
Short 15%
Adequate 76%
Surplus 8%

Soil Moisture Conditions
as of June 10, 2007

Looking Ahead

European corn borer - The treatment window for first generation corn borer larvae is open across the southern and west central districts where 800 GDD (base 50°F) were recently surpassed. Surveys from June 11 to 14 found very light infestations of new larvae. No more than 8% of the corn plants in the Dane, Dodge and Rock County areas showed feeding injury by first and second instar European corn borers. Larvae in advanced areas may reach the third instar stage and begin tunneling into corn stalks or midribs in the week ahead. Insecticides are not effective against larvae that have tunneled into plants, making it critical to scout and treat heavily infested fields before 1,000 GDD are reached.

Potato leafhopper - An abrupt increase in populations has occurred in many southern second crop alfalfa fields. Nymphs are becoming more noticeable and a combination of this stage as well as the adults range as high as 4.2 per sweep in south central alfalfa. Reports received this week indicate populations are moderate to high on a wide variety of plants besides alfalfa, such as potatoes, apples and snap beans. Closely monitor leafhopper levels by sweeping forage crops and potatoes or by counting the number per leaf in apple orchards in the week ahead. It can be speculated at this time that this insect will become a problem in some areas of the state before the season is over. Continued high temperatures could bring about an explosion in potato leafhopper populations in the next week.

Corn earworm - Hartstack traps should be installed as soon as possible and counts reported to Clarissa Hammond by calling (608) 224-4544 or emailing Clarissa.Hammond@wisconsin.gov. Replace the Hercon Zea lure tape once every two weeks through July 15, then once a week from July 16 through August. The corn earworm season is already underway in Wisconsin, with trappers from Lancaster to Manitowoc reporting moth captures in the last week. Trap counts during the June 8 to 14 reporting period were as follows: Coles Valley 0, Janesville 0, Lancaster 43, and Manitowoc 7.

Corn rootworm - The degree-day model for corn rootworm indicates 50% of larval hatch should occur following the accumulation of 684-767 GDD (base 52°F). The lower range of this threshold has been exceeded in parts of southern Wisconsin. Look for the earliest evidence of rootworm feeding beginning next week and through mid-July. With degree day accumulations six to eight days ahead of last year, the first beetles of the season could begin emerging in the next week or two at some advanced southern sites. Expect the greater part of the adult population to make an appearance during the first few weeks of July.

Spotted tentiform leafminer - The second flight of moths is underway in the southern and central parts of the state where 750 GDD (base 50°F) have accumulated. Expect

counts in pheromone traps to increase in the coming week as the peak second flight of moths approaches in the south. Counts this week ranged from 0 to 1,530 moths per trap.

Apple maggot - Red ball traps and yellow sticky boards monitoring the emergence of apple maggot flies should be placed in orchards over the weekend and examined weekly. According to the apple maggot degree day model, the first flies of the season will begin to appear around 900 GDD (base 50°F). This threshold has already been surpassed near Beloit, Dubuque and La Crosse. The apple maggot fly is distinguished from similar fruit flies attracted to AM visual traps by an F-shaped wing banding pattern and conspicuous white spot on the thorax.

Periodical cicada - Emergence of Brood XIII cicadas was documented near Mazomanie in Dane County earlier this week. Localized populations have been reported at locations in Iowa, Richland, Rock and Walworth counties thus far. DATCP and DNR records from 1973 and 1990 indicate emergences may also occur within areas in Crawford, Grant, Kenosha, Racine and Sauk counties before the Brood XIII extravaganza is over. Cicada sightings are being compiled and mapped by DATCP Entomologist, Krista Hamilton. Readers are encouraged to report observations to her by emailing krista.hamilton@datcp.state.wi.us.

Rose chafer - Look for rose chafer activity to begin in sandy areas of the central and west central districts next week. The adults generally appear around this time each June and live for about three weeks. During this brief period, beetles may skeletonize the leaves on a wide variety of plants, including grapes, fruit trees, roses and raspberries. Adults are frequently observed flying about corn fields on warm, sunny afternoons. Rose chafer grubs feed on the roots of plants in old fields, pastures and other open areas, but typically do not cause economic damage.

Corn

Surveys this week in V5 to V9-stage corn fields revealed feeding injury attributable to three leading pest insects: European corn borer, stalk borer and true armyworm. Larval feeding injury by the first two pests has become increasingly evident, and both deserve close scrutiny during the next two weeks. In contrast, much of the larval population of armyworms has matured and is no longer a threat due to pupation. It should be noted that localized infestations may still develop in the central and northern areas in the next week. Two V3 and V5-stage fields near Melvina and Cashton were treated with an insecticide on June 12 after 70-75% of plants showed feeding injury. The armyworm larvae were approximately ½ inch-long. In southern corn fields, the notched leaves and untidy whorls symptomatic of armyworm feeding remain visible in affected field margins although the larvae have matured and ceased feeding.

In the week ahead, pest surveillance in field and sweet corn should be focused on newly-hatched European corn borer larvae and stalk borer larvae moving into fields from nearby weed hosts. The feeding injury caused by the larvae of these species is distinctive and easy to diagnose in whorl-stage corn. European corn borers are in the egg, first or second instar larval stages. Feeding by young larvae is visible on the emerging whorl leaves as tiny “shotholes” or “windowpanes”, illustrated in the image below. Stalk borer larvae are roughly half-grown at this time, (about ¾ inch-long) and their feeding causes “dead heart” or gives leaves a general ragged appearance.



Feeding injury by first instar European corn borer Krista Hamilton DATCP

Black light trap captures since mid-May suggest the impact of the first generation of corn borers will be minimal, but surveys between 800-1000 GDD (base 50°F), while larvae are present, are needed to accurately determine the potential population density and need for control. Bt corn hybrids for control of European corn borer might suppress, but will not control foliar feeding pests such as stalk borers and armyworm. The table to the right lists the effect of Bt corn (ECB hybrids) on a range of insects that feed on corn.

European corn borer - The treatment window for first generation corn borers has opened near Dubuque, Beloit, La Crosse and Madison where 800 GDD (base 50°F) were surpassed this week. Pesticides directed against European corn borers must be applied during this specific period between egg hatch and the time larvae bore into plants in order to be effective. Only larvae that have not bored into plants can be killed. Decisions to treat first generation European corn borers should be based on the percentage of fresh whorl feeding and the presence of live larvae in the whorl. Control measures are effective as long as the majority of larvae are feeding in the whorl and have not entered the stalk. See UWEX Publication No. A1220, [European Corn Borer](http://learningstore.uwex.edu/pdf%5CA1220.pdf), at <http://learningstore.uwex.edu/pdf%5CA1220.pdf> for determining cost versus benefit of insecticidal control in whorl-stage corn.

The first flight of moths has decelerated since peak captures were documented in black light traps during the week of May 31 to June 7. Fresh eggs varied from 0 to 3 per 50 plants in V7-V9 Adams County fields and from 0 to

2 per 50 plants in V8-V9 Juneau County fields. No eggs were found per 100 plants examined in three V7 Portage County fields. Larval feeding is apparent in the whorls in southern and central Wisconsin. New larvae were found infesting 0-8% of plants in Adams County, 0-8% of plants in Dane County, 0-6% of plants in Dodge County, and 0-2% of plants in Rock County. Most corn fields have very low degrees of European corn borer infestation, and many have no detectable population of larvae. All larvae observed were in the first or second instar on June 14.

Major corn pests and the expected effect on them by Bt corn hybrids effective against corn borers.

Corn Pest	Effect of Bt Corn (ECB Hybrids)
Armyworm	Not controlled. Some effect on growth rates, some control may occur if infestation starts with small larvae.
Corn rootworm adults	Not controlled
Corn rootworm larvae	Not controlled by the events that control ECB.
Corn leaf aphid	Not controlled
Corn earworm	Some control with some events
Cutworms	Not controlled
European corn borer	Controlled. Main target of Bt corn. Research results indicate 100% control of first generation and slightly lower control of second generation.
Fall armyworm	Not controlled
Grasshoppers	Not controlled
Spider mites	Not controlled

Frank B. Peairs, Department of Bioagricultural Sciences and Pest Management, Colorado State University.

<http://cls.casa.colostate.edu/TransgenicCrops/BtQnA.pdf>

Stalk borer - Movement of this pest from weed hosts to corn plants is underway in areas of the state where 1,100 GDD (base 41°F) have been surpassed. In the week ahead, 50% movement is expected to occur near Madison, La Crosse and Eau Claire, between 1,400 and 1,700 GDD. During this period of peak migration to corn fields, plants will either be infested from the top down, when stalk borer larvae enter through the whorl of plants and move downward, or from the base up, in instances when larvae tunnel into the base of the plant and tunnel upward into the whorl. Larvae which enter from the base and tunnel upward cause the symptom known as “dead heart”, while larvae that enter through the whorl and bore downward cause a series of ragged holes that increase in size as the leaves unfold. Recent surveys indicate a larger percentage of stalk borer larvae are entering the whorls and causing ragged leaves. “Dead heart” was not

observed in any of the Dane, Dodge or Rock County fields checked in the past week where infestations affected no more than 6% of the edge row plants. A minimum of two sets of 100 plants, 100 in the third row from the edge and 100 in an interior row, should be examined for stalk borer injury in the week ahead. Spot treatments are not effective against larvae that have entered the corn stalks.



Stalk borer feeding injury

www.vegedge.umn.edu

True armyworm - Now is a transitional time between armyworm generations. The first generation of larvae has matured, some have pupated, and adults are beginning to appear in black light traps. The unmistakable feeding injury caused by mature armyworm larvae was noted in sweet corn fields checked near Mazomanie in western Dane County. Roughly 14% of plants in the outer two edge rows showed feeding injury and full-grown, prepupal larvae were detected in the whorls of 4 per 100 plants examined. In Monroe County, UW-Extension Agent Bill Halfman reported first generation armyworm feeding was sufficient to justify insecticide application in a few scattered fields near Cashton and Melvina. Damage by the first generation of larvae in early June is sporadic and depends largely on the magnitude of flights reaching Wisconsin from southern U.S. reservoirs early in spring. Evidently an adequate numbers of migratory moths arrived during the first and second weeks of May to produce economic populations of larvae in Monroe County.



Armyworm leaf feeding and frass

Krista Hamilton DATCP

Also at this time, counts of armyworm adults are escalating for the second time this season. Moths of the second flight are appearing in black light traps and eggs of the largest and most damaging second generation are beginning to be deposited in corn fields with grassy weeds such as foxtail, quackgrass, goosegrass and nutsedge. Managing grassy weeds now may reduce the likelihood of problems later this month. Three generations of true armyworm, each lasting 5-6 weeks, occur in Wisconsin each season. The second larval generation expected to occur later this month and in July is the largest and most damaging.

Western bean cutworm - Milk jug traps baited with a pheromone lure to attract western bean cutworm moths are being installed along major highways and county roads in the western region of the state. Survey efforts for this pest in 2007 will be concentrated in the western part of the state where the highest populations have been documented since trapping was initiated in 2005. In previous years of survey, the objective of trapping was to establish the easternmost distribution of western bean cutworm in Wisconsin. However, since moths have been detected as far east as Lake Michigan, the survey strategy has been modified to determine its relative abundance in western Wisconsin.

Cooperators monitoring western bean cutworm this season should place traps by next week, as the first moths are expected to appear in traps by late June. Trap counts will be used in conjunction with degree day accumulations to forecast moth emergence and critical scouting periods in various parts of the state. Weekly trap counts will be posted in the Wisconsin Pest Bulletin and on the Iowa State University WBCW Monitoring Network website at <http://www.ent.iastate.edu/trap/westernbeancutworm/isite>.

Corn earworm - Weather systems producing strong southerly winds during the first week of June directed the first corn earworm moths of 2007 into Wisconsin from overwintering grounds in the southern U.S. Near Lancaster in the southwest district, 43 moths were captured between June 8 and 14, and 28 of the migrants arrived over the weekend. Low numbers of corn earworm moths (0 to 7) also appeared in traps near Coles Valley and Manitowoc, in the west central and east central districts, respectively. No moths were registered at the Janesville trap location in the past week.

Forages

Potato leafhopper - Reproduction is underway in second growth alfalfa. Potato leafhopper counts in western Dane County ranged from 1.1 to 4.2 per sweep in 10-14" alfalfa in the past week and nymphs constituted about 5% of the population. Counts in 8-12" eastern Dane County fields were lower, ranging from 0.5 to 1.9 per sweep. A second-year stand of potato leafhopper-resistant alfalfa near DeForest had higher numbers of adult leafhoppers than nearby non-resistant fields. Also, nymph production was noted in the field, which indicates the variety was not

resisting leafhoppers well. Surveys in the east central and northeast regions found low to moderate adult populations, ranging from 0.8 to 1.0 per sweep in 6-8" regrowth in Calumet County, from 0.6 to 1.7 per sweep in 6-8" regrowth in Oconto County, from 1.1 to 1.8 per sweep in 10-15" regrowth in Outagamie County, and from 0.1 to 1.1 per sweep in 3-8" regrowth in Shawano County. The action threshold for potato leafhopper in alfalfa is 0.5 per sweep in 3-6" fields, 1.0 per sweep in 6-12" fields, and 2.0 per sweep in 12-14" or taller fields. Expect leafhopper pressure to escalate in alfalfa and other susceptible plants as more nymphs are produced in the coming week.



Potato leafhopper

Krista Hamilton DATCP

Alfalfa weevil - Numbers have decreased considerably in the south due to pupation, but fields in the central and northern regions still face the possibility of moderate to heavy tip feeding injury. Surveys in the east central district this week found very few larvae (<15 larvae per 20 sweeps). Nevertheless, continue to check regrowth alfalfa for larvae and tip feeding. Beyond late June, the threat of heavy tip feeding is expected to subside.

Pea aphid - Populations continue to increase and a few individual alfalfa fields were noted to have counts as high as 44 per sweep in Dane County. Winged adults, non-winged adults, and nymphs were present in all of the fields surveyed. Although these densities are not considered excessive for alfalfa, chemical control in peas may soon be warranted if sweep net counts exceed 10-35 aphids per sweep in fields that are more than 15 days from harvest. Pea aphids vector seedborne mosaic and alfalfa mosaic virus; both are yield-reducing viruses in peas.

Soybeans

Bean leaf beetle - The fifth annual spring survey for overwintered in alfalfa was completed earlier this week. Survey specialists sampled 183 first crop alfalfa fields in 44 Wisconsin counties between May 9 and June 13 and collected beetles at 86 (47%) of the sites. The 2007 survey yielded 514 bean leaf beetles from the fields checked, more than any previous spring survey. The highest number of bean leaf beetles obtained per field was

26 per 200 sweeps in Walworth County. Relatively high counts of beetles were also detected in Jefferson, Lafayette and Rock counties. The overwintered beetles collected as part of this survey are undergoing testing for Bean Pod Mottle Virus (BPMV) at the DATCP Plant Industry Laboratory in Madison. As of June 8, beetles from four sites in Iowa, Lafayette and Racine counties tested positive for BPMV. Final results of ELISA testing for BPMV will be published in the June 29 issue of the bulletin.

Surveys of V1-V3 soybeans on June 11 and 12 found 4-33% defoliation (average 16%) in Columbia County, 2-92% defoliation (average 22%) in Dodge County, and 16-84% defoliation (average 49%) in Washington County. Levels of bean leaf beetle defoliation and the number of beetles per foot of row should continue to be monitored in the week ahead. Yield loss from bean leaf beetle injury to leaves may occur once densities reach 16 per foot of row in VC-V1 soybeans and 39 per foot of row V2+ soybeans.

Soybean aphid - Colonies of soybean aphids have grown more prevalent in southern counties since aphids first were detected on May 24, but densities remain very light. Columbia County soybean fields surveyed this week had 0-45% of the plants colonized with densities ranging up to 95 aphids per infested plant. Washington County soybean fields had 0-20% of the plants colonized, with no more than six aphids per infested plant. No soybean aphids were detected in eight Dodge County fields surveyed. Soybean aphid densities are unlikely to remain low for much longer. Monitor the rate of population build-up in the next few weeks and expect a marked increase in soybean aphid populations during the first week of July if temperatures continue to be favorable. Control is warranted when densities reach 250 aphids per plant on 80% of the plants.

Weeds

Weed update - The dandelion-like flower heads of western salsify or yellow goatsbeard (*Tragopogon dubius*) are nearly mature and ready to be spread via their wind-dispersing pappus. The common name goatsbeard comes from the pappus/seed arrangement after flowering, which vaguely resembles the beard of a goat. Spotted knapweed (*Centaurea biebersteinii*), bull thistle (*Cirsium vulgare*) and plumeless thistle (*Carduus acanthoides*) are beginning to flower in ditches, fencerows and along roadsides. Wild parsnip (*Pastinaca sativa*) and crown vetch (*Coronilla varia*) are in full bloom in the southern two-thirds of the state, while the flowering period for cow parsnip (*Heracleum maximum*) is waning. Dense populations of wild parsnip were observed growing along the Interstate from Minnesota to Madison, which suggests now would be an ideal time to take note of the yellow umbels of this highly phototoxic plant.

Spotted knapweed - *Centaurea biebersteinii*, designated as an invasive plant, has recently received a great deal of attention in Wisconsin. Visual surveys and anecdotal reports from land managers indicate there has been a substantial increase in populations across the state.

Experimental releases of biological control agents have been conducted at limited sites Wisconsin and Minnesota, but more research is needed biological control efforts more efficient and effective. Since 2003, the spotted knapweed biological control agents *Agapeta zoegana*, *Bangasternus fausti*, *Cyphocleonus achates*, *Larinus minutus*, and *Larinus obtusus* have been released at sites in Burnett, Waushara and Monroe counties. Both a Federal PPQ 526 permit and a State of Wisconsin permit are required before any biocontrol agent may be released. For more information or to obtain a permit application, please contact Clarissa Hammond at (608) 224-4544 or Clarissa.Hammond@wisconsin.gov.



Tragopogon dubius

Clarissa Hammond DATCP



Plumeless thistle

Clarissa Hammond DATCP

Fruit

Apple maggot - Emergence of the first apple maggot flies should occur in the next two weeks now that 900 GDD (base 50F) have been exceeded at several locations in southern and west central Wisconsin. Growers who have not already done so should place red ball traps and yellow sticky boards over the weekend. Be sure to hang visual traps at eye-level on the outside of trees where they are visible to passing apple maggot flies. Traps should be placed in the border row of the earliest maturing varieties

to catch flies moving in from abandoned trees. The two types of traps used to monitor apple maggot activity are the red ball trap and the yellow sticky board. Yellow sticky boards mimic a nectar source and are attractive to unmated male and female apple maggot flies, usually during the first 10 days after emergence. The red ball resembles a ripe, red apple and attracts mated female flies ready to deposit eggs.

An important aspect of the apple maggot life cycle to consider is the how the flies behave after emergence. When the flies first surface from the soil they are active in orchards and feed, but do not mate for the first 10 days. It is in this 10-day period that apple maggot control is most strategic, before the females begin to lay eggs. During the non-mating period yellow sticky boards are more attractive, but after mating has occurred the red balls work best. Both traps are recommended because emergence of apple maggot flies is closely linked to soil moisture levels and often occurs in increments, especially after periods of light rain. In very dry years some apple maggot pupae may prolong emergence until the following growing season. Expect flies to become active this month in areas where soil moisture conditions are favorable for emergence.

Vegetables

Cabbage looper - Very low numbers of cabbage looper moths were documented in the last reporting period. Interestingly, no moths found their way into the pheromone trap at Lancaster, while six moths were reported much farther north near Chippewa Falls. Cabbage looper is another pest that migrates into Wisconsin each summer from overwintering sites in the southern U.S. The first peak flight of adults should occur shortly in southern Wisconsin, but not until early to mid- July in the north. Females begin laying eggs in hosts within 10-12 days of arrival into the state, and the eggs hatch 3-6 days later.



Cabbage looper pheromone trap

Clarissa Hammond DATCP

Nursery, Forest and Landscape

Leafminers - Serpentine mines of the columbine leafminer,

Phytomyza aquilegiovora, were observed on columbine plants in numerous counties during nursery inspections in the past week. Columbine leafminers are just one of many leaf mining insects that live within leaves and feed between the interior tissues. Many different insects are leafminers, including certain wasps, flies, moths and beetle species.



Columbine leafminer

<http://www.ces.ncsu.edu>

Leafminers are usually a minor pest, causing aesthetic damage to plants. Symptoms on plants typically appear as blisters, blotchy mines, or serpentine tunnels. Various leafminers are categorized by the shape of the mines produced by their feeding. For example, serpentine leafminers produce zigzag mines through the leaf and blotch leafminers create large, irregular-shaped mines. Heavy infestations of leafminers can result in stunting due to reduced photosynthesis.

Dipteran (fly) leafminers typically overwinter as pupae either in the soil or in infested plant debris. In the spring, flies emerge and deposit eggs on or near susceptible hosts. Upon hatching, the larvae (maggots) immediately begin feeding, and cause serpentine mines or tunnels to form throughout the leaves. When the larvae reach the last instar, they drop to the ground to pupate.

Coleopteran (beetle) leafminers overwinter as adults, often in the leaf litter beneath host plants. Adults emerge in the spring and begin feeding on plant parts, including the leaves. Females deposit eggs on the host leaves in mid-spring, while the larvae hatch and feed as leafminers until pupating in mid-summer. Pupation often occurs within the mine. Adults feed for a short time after emerging, then drop to the ground to overwinter at the onset of cold weather.

Chemical control of leafminers is difficult because the vulnerable larval stages are protected within the leaf tissues. Insecticides carried systemically throughout the plant may be effective against the larvae. In some instances, adult populations may be targeted by chemical sprays in order to prevent egg laying and the subsequent formation of leaf mines.

Southwest region: Leafcurl aphids and potato leafhoppers on skyline ash, elm flea weevil on prospector elm, anthracnose on swamp white oak and 'Autumn Blaze' maple, lecanium scale on swamp white oak, maple shoot tip borer on 'Indian Summer' maple, nipple gall, and island chlorosis on hackberry, two lined chestnut borer on northern pin oak, powdery mildew on horse chestnut, viburnum crown borer on viburnum, virus on 'Bonica' rose, red barrenwort, 'Undulata Variegata' and 'Albo Marginata' hosta, Zimmerman pine moth on Austria pine, leafminer on columbine, botrytis on vinca, and linden borer on Redmond linden in Dane County.

Southeast region: Blackspot and powdery mildew on rose, botrytis on geranium, colletotridum on phlox, leafspot on ageratum, petunia and pansy, anthracnose on hosta, drought stress on 'Wine and Rose' weigela, red twig dogwood and arrow wood viburnum and rust on daylily in Milwaukee County.

Ash plant bug on green ash, apple scab on 'Profusion' crabapple, black spot on rose, leafhoppers and Japanese beetle on hollyhock, cedar hawthorn rust on 'Crimson Cloud' hawthorn, leafminer on hawthorn and aphids on service berry in Dodge County.

West central region: Powdery mildew and black spot on roses, septoria and aphids on spirea, fletchers scale on yew, columbine sawfly on delphinium and webworm on alpine currant in Sauk County.

East central region: Powdery mildew on rose and columbine, RMV on 'Climbing American', 'Fragrant Cloud', 'Tropicana', and 'Mr. Lincoln' rose, shothole disease on purple leaf sand cherry and leafminer on columbine and 'Green Mt' sugar maple in Winnebago County.

Northwest region: Broom rust and balsam twig aphid on balsam fir in Pierce co. Hosta virus X (HVX) on 'Aureo Marginata', 'Niagara Falls', 'Krossa Regal', 'Summer Breeze', 'Paul's Glory', 'Sum of All' hosta and aphids on 'Magic Carpet' and 'Neon Flash' spirea in Polk co. Aphids on 'Little Princess' spirea, canker on poplar and crabapple and spittlebug on 'Northern Gold' forsythia in Barron County. Rose mosaic virus (RMV) on 'Mr. Lincoln' rose, fletchers scale on taunton spreading yew, aphids on 'Neon Flash' spirea and septoria on laura phlox in St. Croix County. Bristly rose slug on assorted roses and thrips on 'Red apple Barron' apple, in Polk County.

Gypsy Moth

Gypsy moth spray program - Pheromone flake treatment is scheduled to begin the week of June 25 in southern and south central Wisconsin. The tiny, thin, green flakes release the female gypsy moth's scent, which confuses male moths in search of mates. The sticky flakes will be sprayed onto the leaves of trees by planes. About one to two flakes will be applied per square foot of tree canopy.

Unlike Btk spraying, only one application of flake treatment

is needed in a treatment site. Treatments will move northward through July and possibly into August. For more information, call the toll-free number 1-800-642-6684 or visit the website gypsymoth.wi.gov. Readers also can view maps of spray sites and access more information on the DATCP Web site at www.datcp.state.wi.us by clicking on "Gypsy Moth Spraying" under "Agency Topics".

Black Light Trap Counts through June 14

Black light traps - Elevated numbers of true armyworm moths were captured for the second week in black light traps around the state. A high count of 257 moths was registered at the Marshfield trap location. Other counts were as follows: Chippewa Falls 7, Coles Valley 19, Janesville 78, Lancaster 32, Manitowoc 43, and Mazomanie 22. This flight is comprised of the adult progeny of migratory moths that arrived from reservoirs in the Gulf States last month.

	ECB ¹	TA ²	BCW ³	SCW ⁴	DCW ⁵	WBCW ⁶	CE ⁷
Southwest							
Lancaster	6	41	1	5	0	0	0
South central							
Arlington	18	11	0	2	0	0	0
Southeast							
Janesville	3	4	0	0	0	0	0
East Troy	32	6	0	0	2	0	0
West central							
Sparta	63	17	0	4	0	0	0
Chippewa Falls	1	1	0	0	0	0	0
Central							
Wausau	1	19	0	3	2	0	0
Marshfield	12	70	1	9	0	0	0
East Central							
Manitowoc	2	58	2	11	0	0	0

¹ European Corn Borer; ² True Armyworm; ³ Black Cutworm; ⁴ Spotted Cutworm;

⁵ Dinky Cutworm; ⁶ Western Bean Cutworm; ⁷ Corn Earworm.

	CabL ⁸	CelL ⁹	AlfL ¹⁰	ForL ¹¹	FA ¹²	VCW ¹³
Southwest						
Lancaster	2	1	0	4	0	0
South central						
Arlington	0	6	0	0	0	0
Southeast						
Janesville	0	4	0	0	0	0
East Troy	0	1	0	0	0	0
West central						
Sparta	0	3	0	0	0	0
Chippewa Falls	0	1	0	0	0	0
Central						
Wausau	0	0	0	0	0	0
Marshfield	0	5	0	0	0	6
East Central						
Manitowoc	0	3	0	0	0	0

⁸ Cabbage Looper; ⁹ Celery Looper; ¹⁰ Alfalfa Looper; ¹¹ Forage Looper;

¹² Fall armyworm; ¹³ Variegated Cutworm.

Although southern black light traps should have documented a decrease in European corn borer moth numbers now that the peak flight has long since passed, counts actually increased at several sites during the past week. Moth counts increased from 1 to 16 at Chippewa Falls, 6 to 13 at Lancaster, 12 to 28 at Marshfield, 18 to 32 at Reedsburg, and remained the same at 3 moths in Janesville. The most significant decline in first flight activity was reported from Coles Valley in Monroe County where moth numbers decreased from 63 to 8. Trap counts at Manitowoc in the east central region decreased from 2 to 0.

Spotted cutworm moths increased in traps this week. Counts were as follows: Lancaster 17, Mazomanie 3, Coles Valley 23, Marshfield 26 and Manitowoc 2. Janesville and Chippewa Falls both caught 0 SCW moths.

Exotic Pest of the Week

Soybean pod borer - The soybean pod borer, *Maruca vitrata*, is a tremendously destructive pest of legume crops in various tropical and semitropical regions of the world. Although it has not become established in the continental United States, it has been detected in Texas, Louisiana and Florida.

Wisconsin ranks among the top 13 soybean producing states in the United States and in 2005 a record 65.5 million bushels of soybeans were produced. A devastating pest such as the *Maruca vitrata* could severely impact Wisconsin agriculture. As the common names soybean, bean or legume pod borer indicate, this insect is a pest to several legume crops, not just soybeans. The most common hosts are cowpeas, common beans and soybeans.

Since this pest has not yet been found in the Midwest, the exact life cycle in the region is still unknown. In regions where it is established, eggs are laid on flower petals or sepals and larvae will feed for approximately three weeks on the flowers and bean pods. If feeding damage or frass is observed, pods are to be cut open and inspected for larvae. Damaged or discolored flowers and reduced pod production are symptoms of soybean pod borer infestation.



Soybean pod borer

www.maine.gov

Apple Insect Trap Counts from June 8 to 14, 2007

County	Site	Date	STLM ¹	RBLR ²	CM ³	OBLR ⁴	AM red ⁵	AM yellow ⁶
Bayfield	Erickson	6/08-6/14	47	0	9			
Bayfield	Gellerman	6/04-6/10	4	0	0			
Bayfield	Lobermeier	6/08-6/14	3	2	0			
Bayfield	Bayfield Apple	6/08-6/14	28	0	15			
Bayfield	Bayfield Apple	6/08-6/14	41	0	30			
Brown	Oneida	6/08-6/14	240	0	5	0		
Crawford	Gays Mills E	6/08-6/14	190	3	85	5		
Crawford	Turkey Ridge	6/08-6/14	841	4	41	41		
Dane	Deerfield	6/08-6/14	657	0	6	18		
Dane	Stoughton	6/08-6/14	132	17	4.5	3		
Dane	West Madison	6/08-6/14	137	1	12	10		
Dodge	Brownsville	6/08-6/14	9	0	3	6	0	0
Fond du Lac	Rosendale	6/07-6/15	14	17	3	1		
Fond du Lac	Malone	6/08-6/14	1000	1	1	8		
Grant	Sinsinawa	6/08-6/14	0	0	3	6		
Green	Brodhead	6/08-6/14	50	90	14	4		
Iowa	Dodgeville	6/08-6/14	462	0	33	1		
Iowa	Mineral Point	6/08-6/14	70	10	0	0		
Jackson	Hixton	6/08-6/14	38	0	1	0		
Kenosha	Burlington	6/08-6/15	500	3	6	10		
Marquette	Montello	6/04-6/10	156	0	1	6		
Marinette	Wausaukee	6/08-6/14	46	0	8	0		
Ozaukee	Mequon	6/07-6/14	105	0	10.3	9.5		
Pierce	Beldenville	6/08-6/14	0	2	20	4		
Pierce	Spring Valley	6/08-6/15	188	0	14	17		
Racine	Rochester	6/08-6/14	290	3	6.5	4		
Racine	Raymond	6/08-6/14	1278	0	2	23		
Richland	Hill Point	6/08-6/13	880	0	16	27		
Richland	Richland Ctr E	6/08-6/14	950	0	22	6		
Richland	Richland Ctr W	6/08-6/14	650	0	7	11		
Sauk	Baraboo	6/08-6/14	80	4	18	2		
Waukesha	New Berlin	6/08-6/14	1530	0	6	28		

¹Spotted tentiform leafminer; ²Redbanded leafroller; ³Codling moth; ⁴Obliquebanded leafroller; ⁵Apple maggot red ball trap; ⁶Apple maggot yellow sticky trap.



EXOTIC PEST OF THE WEEK
Soybean pod borer, *Maruca vitrata*

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