

Wisconsin Department of Agriculture, Trade & Consumer Protection

# Wisconsin Pest Bulletin

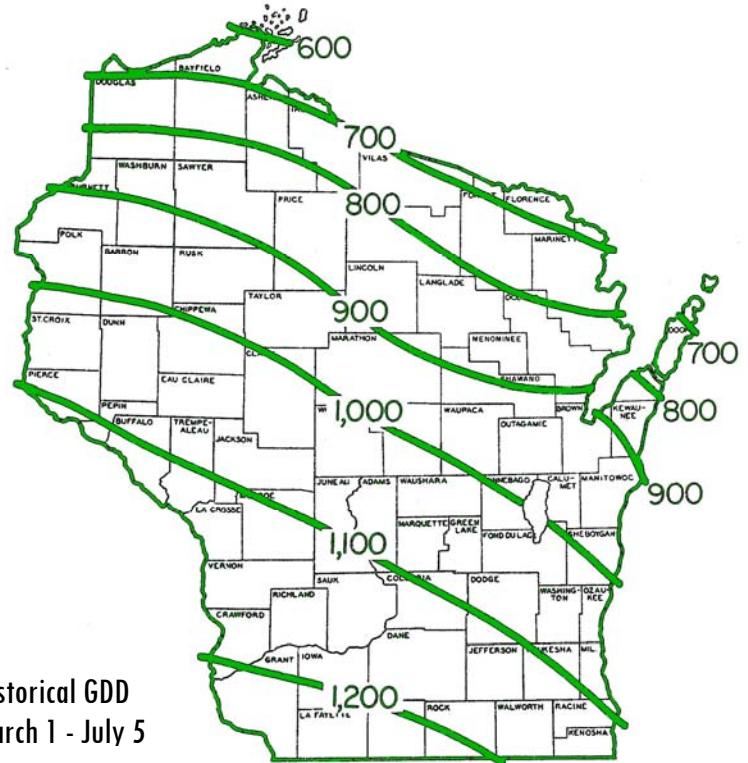
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Your weekly source for crop pest news, first alerts, and growing season conditions for Wisconsin



## Weather and Pests

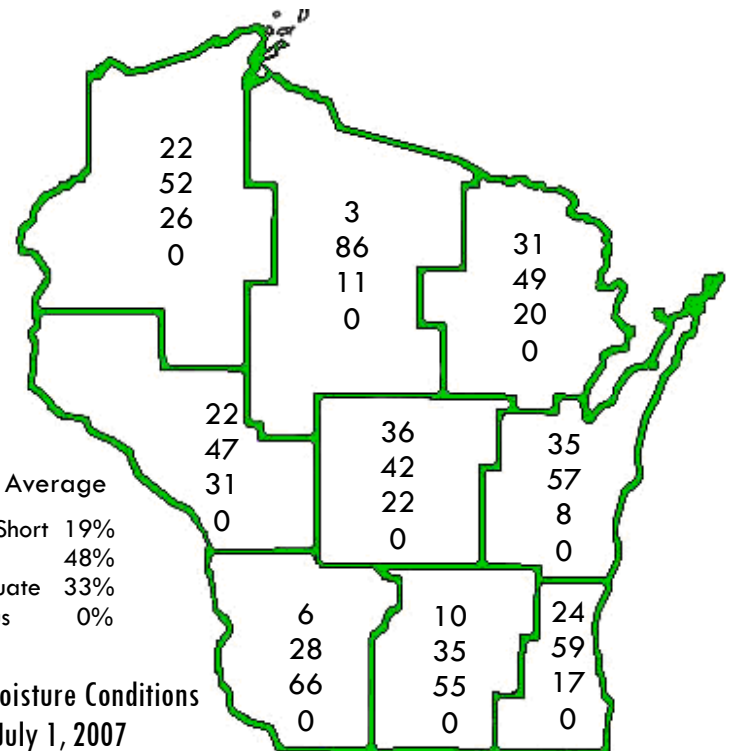
Widely scattered showers and storms in the past week produced varying amounts of rainfall and reduced soil moisture shortages. Rainfall totals ranged from 0 to 4 inches for the week, with locally higher levels in the southwest and west central areas. On Independence Day, skies were partly sunny over the state and high temperatures ranged from the 70s near the Great Lakes to 90°F near Eau Claire. The weather was nearly ideal for corn development and reinforced strong crop conditions. In terms of acreage planted and the rate of growth, 2007 is projected to be a record year for corn in Wisconsin. Across the U.S., farmers are expected to sow 93 million acres of corn this summer, about 19% more than last year and the largest harvest since the end of World War II.



Historical GDD  
March 1 - July 5

## Growing Degree Days through 07/05/07 were

	GDD 50F	2006	5-Yr	48F	40F
Dubuque, IA	1356	1163	1217	1409	2266
Lone Rock	1295	1109	1162	1329	2176
Beloit	1323	1212	1207	1358	2222
Madison	1246	1073	1131	1295	2118
Sullivan	1196	1106	1125	1201	2045
Juneau	1189	1029	1090	1227	2036
Waukesha	1157	1018	1054	1201	2000
Hartford	1173	1014	1046	1220	2016
Racine	1122	0968	0983	1169	1956
Milwaukee	1126	0983	0977	1172	1960
Appleton	1148	1024	0986	1198	1958
Green Bay	1045	0932	0887	1097	1848
Big Flats	1180	1087	1077	1188	1993
Hancock	1157	1064	1050	1153	1942
Port Edwards	1159	1097	1026	1188	1962
La Crosse	1390	1251	1218	1378	2301
Eau Claire	1261	1064	1085	1287	2117
Cumberland	1155	1051	0957	1163	1953
Bayfield	0848	0776	0687	0880	1542
Wausau	1068	0963	0920	1093	1830
Medford	1038	0972	0893	1075	1800
Crivitz	1005	0903	0841	1041	1758
Crandon	0966	0865	0824	0968	1668



State Average

Very Short 19%  
Short 48%  
Adequate 33%  
Surplus 0%

Soil Moisture Conditions  
as of July 1, 2007

## Looking Ahead

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**European corn borer** - The second flight of corn borer moths is expected to begin at locations where 1,400 GDD (base 50°F) accumulate in the week ahead. Plan to scout for second generation egg masses and larvae at 1,550 GDD, or as soon as July 13 near Dubuque, July 14 near Beloit, July 18 near Madison, and July 21 near Hancock. A greater percentage of eggs will be found on leaves near the ear zone. Preferred egg laying sites for the summer flight of moths are late-planted or late-maturing varieties of corn, with sweet corn being the most favored host. The most effective treatment window for second generation corn borers extends from 1,550 to 2,100 GDD.

**Soybean aphid** - Scouting efforts should be intensified in all areas of the state. The first economic population of the season was detected in a Jefferson County field; one of six fields examined had densities exceeding 280 aphids per plant on 100% of the plants. This was the first and only economic population found during surveys this week. Densities are expected to reach the economic threshold in more southern and west central fields in the near future, as plants reach the R2 and R4 stages of growth. Fields in which aphid densities are approaching, but have not surpassed the economic threshold, should be scouted twice weekly to evaluate the rate of aphid build-up. At temperatures between 68 and 86°F, soybean aphid populations can double in size every 1.5 to 1.9 days (Mccornack et al. 2004).

**Corn rootworm** - Look for lodging damage to become apparent in fields where corn root systems have been compromised by heavy larval infestations. The first two to three weeks of July are the most opportune time to assess the degree of larval injury to corn plants, while the first two weeks of August are the best time to evaluate adult populations.

**True armyworm** - Limited observations in south central corn fields revealed old feeding injury, but no active armyworm infestations. The second generation offspring of moths registered in traps last month are developing rapidly under current temperatures and should become evident in fields in the next two to three weeks. Increased monitoring of corn and late small grains is advised.

**Western bean cutworm** - Low pheromone trap counts ranging from 0 to 5 moths this week reflect the beginning of a flight that is expected to continue through mid-August. Follow weekly trap catches as moth activity escalates on the Iowa State Western Bean Cutworm Monitoring Network website at <http://www.ent.iastate.edu/trap/westernbeancutworm/>.

## Forages

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**Potato leafhopper** - Populations continue to be highly variable, with approximately 32% of fields examined in the

south central, east central, and north central counties showing economic numbers of nymphs and adults. Potato leafhopper reproduction, as indicated by the higher proportion of nymphs in sweep nets, appears to have increased since last week. Nymphs in various maturities were present in Columbia County fields, where counts ranged from 1.0 to 1.4 per sweep (average 1.2) in 10-14 inch regrowth. Iowa County fields had counts ranging from 0.2 to 0.5 per sweep in 6 inch regrowth. Reports from Grant County indicate populations are erratic, but generally below economic thresholds. A new seeding at the Lancaster Research Station was sprayed for nymphs earlier in the week.

Surveys in the central districts of the state revealed higher populations than those in the south. Scattered fields in Shawano County showed evidence of pressure from this pest, with v-shaped yellowing at the tips. Counts of adults and nymphs ranged from 0.8 to 1.6 per sweep (average 1.2) in 12-16 inch regrowth in Brown County, from 0 to 1.2 per sweep (average 0.5) in 10-16 regrowth in Marathon County, from 0.3 to 0.4 per sweep (average 0.4) in 3-8 inch regrowth in Oconto County, from 0.3 to 2.1 per sweep (average 1.0) in 10-16 inch regrowth in Outagamie County, from 0.7 to 3.0 per sweep (average 1.6) in 3-6, 8-10, and 18-20 inch regrowth in Portage County, from 0.8 to 2.3 per sweep in (average 1.5) 10-12 and 14-16 growth in Shawano County, and from 0.1 to 1.8 per sweep (average of 0.9) in 8-12 regrowth in Waupaca County. One of three fields checked in Outagamie County had economic populations of potato leafhoppers, three of three fields checked in Portage County had economic populations, and three of six fields checked in Shawano County had economic populations.

The combination of moisture shortages in some areas and escalating leafhopper populations during the past week means that sensitive third crop regrowth is at increased risk for damage. Timely cutting may reduce some of the problem unless numbers are high enough that they carry over into the third crop, in which case spraying would be beneficial. Fields must be scouted carefully before treatment decisions are made. The economic threshold for potato leafhopper in 3" alfalfa is 0.2 per sweep, 0.50 per sweep in 6" alfalfa, 1.0 per sweep in 8-11" alfalfa, and 2.0 per sweep in alfalfa taller than 12".

## Corn

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**Corn pest outlook** - Although corn fields may continue to show residual effects of feeding by first generation European corn borers, true armyworms and stalk borers, most activity of these early season pests has ended. Treatment is no longer an option, and corn plants will simply succumb to or outgrow larval feeding injury. For much of the state, the last two weeks were a transitional interval between the first and second generations of European corn borers and armyworms. Fields surveyed showed late instar corn borers tunneling into stalks, light stalk borer feed injury in the edge rows, old armyworm

feeding injury, and light corn leaf aphid populations. This pest outlook will change dramatically in the next two weeks. Surveys in July should focus on the following mid-season insect pest problems:

- Corn rootworm larval injury to roots
- Corn rootworm adults - emergence and silk clipping
- Second generation corn borer eggs and larvae
- Second generation true armyworm larvae
- Western bean cutworm eggs and larvae
- Corn leaf aphid populations

**European corn borer** - Pupation is underway in parts of southwest, south central and west central Wisconsin where 1,272 GDD (base 50°F) were surpassed recently. In fields surveyed near La Crosse, first generation larvae in the 3<sup>rd</sup> to 5<sup>th</sup> instar stages of development were observed in corn stalks, midribs, and emerging tassels. The treatment period for first generation European corn borers has closed statewide as most larvae have begun to bore into plants. The first moths of the second flight are expected to begin emerging in the west central district today (July 6), and in the southwest district over the weekend (July 7-8). Black light traps in these areas should register the first moths of the summer flight by early next week, although peak flight activity is not likely to occur for another two or three weeks.



Third instar European corn borer larva

Krista Hamilton DATCP

**Corn rootworm** - As adult corn rootworm beetles emerge in increasing numbers, growers are advised to begin scouting fields for silk clipping, lodging, and symptoms consistent with larval feeding on corn roots. Indicators of larval injury are likely to become apparent in infested fields in the coming week, particularly if more severe wind and rain storms occur. Scouting for clipped silks should begin when 70% of the plants in a field are in the process of silking. Use an economic threshold of five beetles per plant when silk clipping is observed during pollination to decide if treatment is justified.

**Western bean cutworm** - Moths were captured at more trapping sites this week, but no significant counts were registered. Pheromone trap catches ranged from

0 to 5 moths, with the highest count reported near Stockholm in Pepin County. Flight activity should increase in the next two to three weeks and peak by early to mid-August. The low numbers of western bean cutworm moths registered in recent days indicates some amount of mating and egg laying is underway. Growers, consultants and advisors should be alert for eggs on corn leaves or small larvae in corn ears when scouting fields in the week ahead.

## Soybeans

**Soybean aphid** - Economic populations of soybean aphids could develop in some southern and west central fields by next week. The first serious infestation of the season, a field which had an average of 280 aphids per plant on 100% of the plants, was detected in Jefferson County. No other economic populations were encountered in 57 soybean fields examined between June 29 and July 5. Soybean aphid densities will continue to increase as plants advance through the early reproductive stages of growth (R2 to R4), although high temperatures over the weekend may suppress soybean aphid reproduction in the short-term. Research by Mccornack et al. (2004) at the University of Minnesota has shown soybean aphid development is best between 77 and 86°F, and the optimum temperature for development is 82°F. Surveys in the past week revealed the following soybean aphid densities based on a sample of size of 20 plants per field (four set of five plants):

**Southwest:** Grant County 15-55% of plants infested with 1 to 115 aphids per infested plant (six fields surveyed); Iowa County 5-45% of plants infested with 1 to 102 aphids per infested plant (four fields surveyed); Lafayette County 0-50% of plants infested with 1 to 35 aphids per infested plant (four fields surveyed).

**South central:** Jefferson County 0-100% of plants infested with 1 to 280 aphids per infested plant (five fields surveyed). The first economic population of the 2007 was detected in a single Jefferson County field on July 5; Rock County 0-70% of plants infested with 1 to 31 aphids per infested plant (six field surveyed).

**Southeast:** Walworth County: 0-90% of plants infested with 1 to 57 aphids per infested plant (six fields surveyed).

**East central:** Brown County 35-45% of plants infested with 1 to 9 aphids per infested plant (three fields surveyed); Outagamie County 25-60% of plants infested with 1 to 16 aphids per infested plant (four fields surveyed).

**Central:** Portage County 10-45% of plants infested with 1 to 13 aphids per infested plant (four fields surveyed); Waupaca County 15-85% of plants infested with 1 to 20 aphids per infested plant (four fields surveyed).

**North central:** Marathon County 40-85% of the plants infested with 1 to 56 aphids per infested plant (four fields surveyed).



**Northeast:** Oconto County 45-75% of the plants infested with 1 to 27 aphids per infested plant (two fields surveyed); Shawano County 0-30% of plants infested with 1 to 13 aphids per infested plant (five fields surveyed).

**Reference:** B. P. Mccornack, D. W. Ragsdale, and R. C. Venette. 2004. Demography of soybean aphid (Homoptera: Aphididae) at summer temperatures. *Journal of Economic Entomology*. 97(3): 854-861.

**Japanese beetle** - Continue to be alert to lacy or skeletonized leaves in soybean fields; both are indicators of Japanese beetle activity. If defoliation is observed, the metallic green beetles are usually feeding nearby. The combination of Japanese beetle defoliation with leaf feeding injury by grasshoppers and bean leaf beetles could push some fields over the threshold of 30%. No more than 30% defoliation should be tolerated in pre-bloom soybeans, 20% defoliation between bloom and pod fill, and 25% after pod fill to plant yellowing.

**Two spotted spider mite** - Mite populations are increasing in some of the drier east and central soybean fields. Damage usually begins at field edges as mites move in from adjacent grasses and weeds. Characteristic white flecks on the underside of the leaves, called "stippling," are the first sign of infestation. As injury worsens, leaves dry out, appear bronzed, and drop off the plant, giving the appearance of drought damage. Plants can also become covered in webbing spun by mites. Treatment is suggested if several leaves have active colonies and damage prior to the R6 to R7 stages.

## Weeds

**Pasture weeds** - Recent issues of the Wisconsin Pest Bulletin have made note of several thistle species that are currently flowering and shedding seed along roadsides in southern Wisconsin. These species, mainly bull thistle, Canada thistle, musk thistle and plumeless thistle, are also commonly found in pastures. Thistles become abundant and may overrun pastures because grazing cattle find them unpalatable.



*Musk thistle*

*Clarissa Hammond DATCP*

Now is an ideal time to control pasture thistles, especially those plants that have not yet formed seed. In fields where plants have gone to seed, bagging and burning the seed head can help minimize further spread. Other control measures include mowing, digging up plants, or applying an herbicide. Digging plants at least 1-2 inches below the soil surface will prevent resprouting. Of the four species mentioned, Canada thistle is the most persistent due its perennial life cycle, and sometimes requires more rigorous control measures. Musk, plumeless and bull thistle are biennial plants which form a rosette one year and flower the next. All of the thistles discussed here use wind as a mechanism for dispersal and their seeds can be carried to distances of several feet.



*Plumeless thistle*

*Clarissa Hammond DATCP*

## Fruit

**Apple maggot** - Emergence of apple maggot flies continued in the past week. This insect is active in southern and west central orchards and treatments for control may be warranted where the economic threshold of one fly per unbaited red ball trap or yellow sticky board is exceeded. The threshold increases to five flies per trap per week when traps are baited with an ammonia attractant.

Apple Maggot Event	Degree Days (50°F)
First adult emergence	900
First eggs laid	1,100
Peak adult emergence	1,600
Peak egg laying	1,750
End of adult emergence	2,800

**Spotted tentiform leafminer** - Trap counts declined at most trapping sites in the past week, indicating peak second flight has passed in the southern areas, except at Raymond and Hill Point where captures of 1,728 and 1,760 moths were reported. Increasing numbers in Bayfield County suggest the second flight is gaining momentum in the far north. Sapfeeder larvae are now detectable on the

undersides of apple leaves in most southern and central Wisconsin orchards. Examine leaves in the week ahead and use an action threshold of 1.0 per leaf to decide if treatment of second generation leafminers is warranted. The speckled tissue feeder mines produced by the later instar larvae are illustrated below.



STLM tissue feeder mines

Jason Fishbach, UWEX Bayfield Co.

**Codling moth** - The second flight of moths is in progress and expected to peak at advanced southern and west central sites where 1,577 GDD (base 50°F) are reached in the next two weeks. Damage from first generation larvae has become evident in the south. Orchardists are advised to assess levels of first generation injury to fruits before second flight activity begins in full. Above-threshold numbers of second generation codling moths were registered at 10 of 23 monitoring sites.

**Light brown apple moth** - This exotic species has NOT been found in the state, despite captures of moths in traps baited with LBAM lure. The moths appearing in LBAM traps in Bayfield, Dane, Dodge, Racine, Fond du Lac, and Pierce counties were identified as tortricids in the genus *Sparganothis* by Steve Krauth, Curator of the UW-Madison Insect Research Collection. An image of the *Sparganothis* moth, a native species, is shown below.



*Sparganothis* spp. captured in LBAM trap

Krista Hamilton DATCP

## Vegetables

**Corn earworm** - Pheromone traps monitoring the early flight activity of this insect reported 0 moths this week. In contrast, the black light traps near East Troy and Marshfield both registered low counts of 5 and 2 moths, respectively. Beginning the week of July 16, pheromone lure should be replaced on a weekly basis.

**Cabbage looper** - Cabbage looper counts decreased from 45 to 27 moths near Chippewa Falls and from 27 to 23 moths near Bourbonnais, Illinois. No moths were reported at Lancaster in the past week. The first flight of adults appears to be on the decline. In the next few weeks, susceptible vegetable crops should be scouted regularly for the larval progeny of this first flight. Higher numbers of moths are expected in the near future.

## Nursery, Forest and Landscape

**Emerald ash borer** - Purple Emerald Ash Borer (EAB) traps have been set by DATCP staff at 16 sites as part of continuing EAB survey and detection efforts. The purple, triangular traps are the latest tools to help researchers determine if the EAB has shown up in the state. Each trap is roughly two feet long, made from corrugated plastic, and coated with an adhesive to capture EAB adults. Federal researchers learned EAB adults are attracted to the color purple while looking for new ways to survey for this pest.

Approximately 130 traps will be deployed this summer in Wisconsin. Survey specialists will check traps every other week through the end of August to see if any beetles have been caught. Ongoing research will compare the effectiveness of the purple traps to the girdled detection trees that have been used in Wisconsin since 2004. Girdled trees are the most reliable way to locate infestations, but at the expense of the tree. If these purple traps eventually prove to be effective, girdled trees may become a smaller component of an early detection program.

The trap locations are five Dane County parks with campgrounds, the Pleasant Prairie landfill in Kenosha County (two locations on the landfill grounds), the woods at Prairie Oak State Office Building in Madison, and eight rest areas on state highways (near Dubuque, Beloit, Genoa City, Kenosha, Lake Mills, Johnson Creek, Portage, and Elkhorn). Traps will be checked every other week. The DATCP sites complement the 10 DNR trapping sites, all of which are located on state properties: Interstate State Park, Kettle Moraine North and South State Forest, Richard Bong State Recreation Area, Devil's Lake State Park, Peninsula State Park, Peshtigo River State Forest and Gov. Thompson State park, High Cliff State Park, Governor Dodge State Park, Mirror Lake State Park/Rocky Arbor State Park and Bigfoot Beach State Park. Traps will be removed in August.



Wisconsin has approximately 725 million ash trees in forest settings. It's also estimated that ash species comprise about 20% of all street trees in the state. Information about emerald ash borer and the problems associated with transporting pests and diseases in firewood can be found on the Wisconsin Emerald Ash Borer Resource website at <http://emeraldashborer.wi.gov>.

**Daylily rust** - Daylily rust was found on hundreds of daylilies in a Waukesha County nursery. The daylilies were purchased from a grower in Oklahoma. Nursery growers and dealers are advised to examine daylilies for symptoms of this infectious disease, such as yellowish-brown streaks on the leaves, small raised yellowish-orange pustules on the undersides of leaves, or small yellowish spots on the upper surfaces of leaves. The pustules release orange spores when rubbed. Daylily rust is relatively new to the United States and was first found in the southeast in 2000. Refer to the May 25 issue of the Pest Bulletin for more information on identification and treatment.



Daylily rust

Anette Phibbs DATCP

to the root zone to feed for a few weeks before pupating. Adult beetles emerge in mid-June and immediately begin feeding on ornamental plants. Mating and egg laying follow shortly thereafter. When depositing eggs, females burrow 2-4 inches in the soil. Eggs hatch in approximately two weeks and the grubs feed on the roots of turfgrass and ornamentals through late August, at which point they are considered to be full-grown. Activity of the larvae, or grubs, is discontinued when soil temperatures fall below 50°F.



Japanese beetle and defoliation

[insectimages.org](http://insectimages.org)

A number of measures may be taken to control Japanese beetles. Traps are available for mechanical control, but trapping has been shown to lure beetles to new, uninfested areas in some instances. Control of grubs can be achieved with biological control agents, such as milky spore disease, insect-parasitic nematodes and fungal pathogens. However, these controls are not always effective. Chemical insecticides are another option, and several are labeled for use against Japanese beetle adults and grubs. Be sure to follow label directions when using insecticides.

**Japanese beetle** - Adults were observed feeding on roses (the preferred food plant) in a Dane County nursery. This exotic and destructive beetle was first detected in New Jersey in 1916 and has since spread through much of the eastern United States, as far south as Georgia. Isolated outbreaks have also been found in California. In the years since, the Japanese beetle has made growing roses next to impossible in some of the most heavily infested states. In the Midwest, beetles occasionally reach economic levels in corn and soybeans.

Adult Japanese beetles feed on foliage or flowers of over 300 species of plants, fruits, vegetables, ornamentals, crops and weeds. They consume the soft tissues of the plant between the veins, skeletonizing the leaves. Larval Japanese beetles feed below ground on the roots of turf and ornamentals, and are a major pest of turfgrass.

In Wisconsin, Japanese beetles overwinter in the soil at average depths of about 2-6 inches. Some may pass the winter months as deep as 20 inches below the surface. In the spring when temperatures reach 50°F, the grubs move

#### Other nursery inspection finds this week include:

**Southwest region:** Septoria and stem canker on santi dogwood, anthracnose on amur maple, erophyid mites on red oak, slugs on hosta, cedar apple rust on 'Prairie Rose' crabapple, leaf curl aphids on 'Molton Lava' crabapple, scab on ornamental crab, gypsy moth and leaf scorch on swamp white oak, Japanese beetle on roses and showy primrose, chlorosis on chrysanthemum, eastern spruce gall on white spruce, dothestroma needle blight on Austrian pine and powdery mildew on rose in Dane County.

**Southeast region:** Hollyhock rust on hollyhock, rust on daylily, shoot tip borer on nannyberry viburnum, shothole disease on purple leaf sandcherry, leaf hopper burn on amur maple, powdery mildew on Chinese lilac, verticillium wilt and nipple gall on hackberry, cedar hawthorn rust on hawthorn, oystershell scale on white ash, phyllosticta on serviceberry, gall midge on spruce, black knot on northern cherry, plant bug feeding on honey locust, guinardia on

horse chestnut, two lined chestnut borer on oak, flea weevil on elm, tent caterpillar on crabapple, downy mildew on ironwood, fletchers scale on yew and arborvitae, tar spot on maple, rhizosphaera on spruce and pine scale and zimmerman moth on Austrian pine in Waukesha County.

**East central region:** Spruce needle drop on Colorado blue spruce, apple scab on crabapple, spindle gall and pale green weevil on big leaf linden, plant bug feeding on honey locust, eastern spruce gall adelgid on spruce, phomopsis on arborvitae, shothole disease and gypsy moth on Canada red cherry, petiole borer on sugar maple, cottony scale on ash, powdery mildew on serviceberry and ironwood, flea weevil on elm, linden borer on little leaf linden, ash flower gall on leprechaun ash, potato leafhopper on sugar maple, oak leaf blister on oak, coin canker on autumn purple ash, imported willow leaf beetle on willow, pseudomonas on 'Pink Elf' hydrangea, golden twig canker on santi dogwood, sawfly damage on rose, viburnum crown borer on viburnum and Hosta Virus X (HVX) on 'Golden Tiara' hosta in Brown County.

**Northwest region:** Apple scab on 'Red Splendor' crabapple, shothole disease on plum, septoria on pagoda dogwood, leafminer on birch, stem canker on nannyberry viburnum, aphids on snowball viburnum, rhizosphaera on Colorado blue spruce and fletchers scale on Hughes juniper in Price County.

Spider mites on alcea hollyhock, thrips on gerbera daisy, cedar apple rust on crabapple, leafstreak on daylily, nipple gall on hackberry, powdery mildew on monarda, plant bug on 'Sutherland Gold' elderberry and black spot on Champlain rose in Pierce County.

Fletchers scale on tauton yew, leafminers and cedar hawthorn rust on thornless hawthorn, trunk cankers on 'Sugar Thyme' crabapple, oak leaf galls on swamp white oak and cedar apple rust on 'Fireside' apple in St. Croix County.

## Gypsy Moth

**Gypsy moth spray program** - The gypsy moth aerial spraying season ended on June 30 in Ashland and Bayfield counties where spray planes made their last treatment of pheromone flakes. This may be the earliest that spraying has been completed in the history of the program. In 2006, the spray season ended in mid-July.

About 108,000 acres in 17 counties were treated with either Btk, NPV or pheromone flakes through the Slow-the-Spread program. Most of the acres (about 71,000) received flake treatments.

The majority of gypsy moth caterpillars are pupating. Moths may begin to emerge early this month. Male moths are light brown with dark markings and are smaller than the white females. The females cannot fly, but release a chemical scent to attract the males. Adult gypsy moths live for approximately two weeks.

## Black Light Trap Counts through July 5

The black light traps at 10 locations registered low numbers of target pests during the last week, indicating that some nocturnal moth species are in between flights. European corn borer counts ranged from 0 to 19 moths, which represents a decrease at nearly all trapping locations. At Lancaster 3 moths were registered, a minor increase from 0 moths the week before. The first European corn borer moths of the second flight should begin to appear in southwest, south central and west central black light traps by early next week, following the accumulation of 1,400 GDD (base 50°F). Peak flight activity is not likely to occur for another two or three weeks.

	ECB <sup>1</sup>	TA <sup>2</sup>	BCW <sup>3</sup>	SCW <sup>4</sup>	DCW <sup>5</sup>	WBCW <sup>6</sup>
<b>Southwest</b>						
Lancaster	3	17	0	1	0	0
Reedsburg	7	-	-	-	-	-
<b>South central</b>						
Mazomanie	0	44	2	2	0	3
Arlington	1	6	8	2	0	1
<b>Southeast</b>						
Janesville	0	65	4	0	0	0
East Troy	0	0	0	0	0	0
<b>West central</b>						
Sparta	1	0	0	0	0	1
Chippewa Falls	5	7	0	0	6	0
<b>Central</b>						
Marshfield	19	10	3	2	0	0
Wausau	3	22	0	6	2	0
<b>East Central</b>						
Manitowoc	2	15	4	11	0	0

<sup>1</sup>European Corn Borer; <sup>2</sup>True Armyworm; <sup>3</sup>Black Cutworm; <sup>4</sup>Spotted Cutworm; <sup>5</sup>Dingy Cutworm; <sup>6</sup>Western Bean Cutworm; <sup>7</sup>Corn Earworm.

	CabL <sup>8</sup>	CeL <sup>9</sup>	AlfL <sup>10</sup>	ForL <sup>11</sup>	FA <sup>12</sup>	VCW <sup>13</sup>
<b>Southwest</b>						
Lancaster	0	3	0	12	0	0
<b>South central</b>						
Mazomanie	0	0	0	2	0	5
Arlington	1	0	0	5	0	3
<b>Southeast</b>						
Janesville	0	15	0	1	0	0
East Troy	0	0	0	4	0	0
<b>West central</b>						
Sparta	0	0	0	0	0	0
Chippewa Falls	1	4	0	0	0	0
<b>Central</b>						
Marshfield	0	6	0	7	0	1
<b>East Central</b>						
Manitowoc	0	1	0	0	0	0

<sup>8</sup>Cabbage Looper; <sup>9</sup>Celery Looper; <sup>10</sup>Alfalfa Looper; <sup>11</sup>Forage Looper; <sup>12</sup>Fall Armyworm; <sup>13</sup>Variegated Cutworm.



Low to moderate numbers of true armyworm adults were captured at trapping locations around the state. All sites except Lancaster and Janesville registered a decrease in numbers compared to last week, while the Lancaster and Janesville traps documented increases of 7 and 3 moths, respectively. True armyworm counts ranged 0-65 during the June 29 to July 5 reporting period. The high count of 65 moths was reported from Janesville.

Spotted cutworm captures decreased to 0-11 moths this week compared to 0-37 moths last week. Forage looper counts ranged from 0-12.

## Exotic Pest of the Week

**Giant woodwasp** - The giant woodwasp, *Urocerus gigas gigas*, like numerous other exotic wood-boring insects, potentially could be introduced into the U.S. in solid wood packing materials (e.g. crates, pallets and dunnage) from Europe and Asia. Similar to the Asian longhorned beetle, emerald ash borer and Sirex woodwasp, the larvae of this insect are capable of surviving long distance transport overseas and easily escape notice during routine port inspections.



Adult female inserting eggs

Stanislaw Kinelski, forestryimages.org



Giant woodwasp larva

Stanislaw Kinelski, forestryimages.org

The 3-4 cm, whitish larvae in the woodwasp family Siricidae are morphologically very similar and difficult to differentiate. Most port inspectors cannot identify woodwasp larvae to species or genus level. Therefore, in instances when woodwasp larvae are detected, inspection forms simply list "Siricidae; species of" instead of the species name. This makes it impossible to know if *U. g. gigas* in particular has been found at U.S. ports. According to a risk assessment by Davis et al. (2005), unidentified siricids were intercepted at least 115 times between 1985-2004; on average, 5.8 interceptions were reported annually. The greatest percentages of interceptions occurred in Atlanta, GA (39%), Chicago, IL (13%), Erlanger, KY (12%), and Long Beach, CA (7%).

Larvae of *U. g. gigas* develop in conifers, including fir (*Abies*), cedar (*Cedrus*), Douglas-fir (*Pseudotsuga*), larch (*Larix*), pine (*Pinus*), and spruce (*Picea*). In its native range, *U. gigas* is considered a secondary pest because it typically infests conifers that are already weakened by fire, wood-boring insects, or pathogens. As is the case with most wood-boring insects, female siricids introduce a symbiotic fungus into the wood during oviposition. This fungus breaks down the woody tissue and enables the larvae to feed. In the case of *U. g. gigas*, the damage caused by sapwood decay fungus *Amylostereum chailletii* may be more significant than the direct damage caused by the woodwasp itself. Sapwood decay fungi typically decrease the value of the timber and may be fatal to trees.

Male and female woodwasps are strong fliers known to fly long distances to recently burned forest sites. Adults commonly emerge from finished lumber in homes, pallets, boxes, etc. Intercontinental spread can be facilitated by transport of infested logs, lumber, wooden crating, pallets and dunnage. According to a USDA APHIS risk assessment estimate, Wisconsin and much of the eastern United States have a climate suitable for the establishment and spread of *U. g. gigas*.



Giant woodwasp galleries

Stanislaw Kinelski, forestryimages.org

For more information of the giant woodwasp, *Urocerus gigas gigas*, visit the USDA APHIS website at [http://www.aphis.usda.gov/plant\\_health/plant\\_pest\\_info/pest\\_detection/downloads/praugigaspra.pdf](http://www.aphis.usda.gov/plant_health/plant_pest_info/pest_detection/downloads/praugigaspra.pdf).



# Apple Insect Trap Counts from June 29 to July 05, 2007

County	Site	Date	STLM <sup>1</sup>	RBLR <sup>2</sup>	CM <sup>3</sup>	OBLR <sup>4</sup>	AM red <sup>5</sup>	AM yellow <sup>6</sup>
Bayfield	Gellerman	06/25-07/0	25	0	0	1	—	—
Bayfield	Lobermeier	06/29-07/05	135	4	5	42	—	—
Bayfield	Bayfield Apple	06/29-07/05	250	0	2	0	—	—
Bayfield	Bayfield Apple	06/29-07/05	675	0	5	0	—	—
Brown	Oneida	06/29-07/05	1450	59	0	0	—	—
Crawford	Turkey Ridge	06/29-07/05	903	156	14	2	5	4
Dane	Deerfield	06/28-07/05	270	111	7	0	2	0
Dane	Stoughton	06/29-07/05	102	169	2	9	0	2.6
Dodge	Brownsville	06/29-07/05	11	28	2	0	0	0
Fond du Lac	Campbellsport 1	06/29-07/05	0	10	6	0	0	0
Fond du Lac	Campbellsport 2	06/29-07/05	5	0	2	3	0	0
Fond du Lac	Rosendale	06/29-07/05	177	121	16	4	1	0
Grant	Sinsinawa	06/29-07/05	0	5	2	0	0	0
Green	Brodhead	06/29-07/05	10	21	1	1	0	0
Iowa	Dodgeville	06/29-07/05	350	111	33	6	0	0
Iowa	Mineral Point	06/29-07/05	63	116	0	0	*1	0
Jackson	Hixton	06/29-07/05	120	0	1	2	0	1
Kenosha	Burlington	06/29-07/05	800	33	2.5	4	0.2	0
Marquette	Montello	06/25-07/01	408	5	0	0	0	0
Marinette	Wausaukee	06/29-07/05	176	6	3	1	—	—
Ozaukee	Mequon	06/29-07/05	7.5	1.5	1.3	0	0	0
Pierce	Spring Valley	06/29-07/06	468	9	0.75	3	0	0.5
Racine	Rochester	06/29-07/05	110	0	5.7	2	0.5	0
Racine	Raymond	06/29-07/05	1728	128	11	12	0	0
Richland	Hill Point	06/29-07/05	1760	90	1	2	0	0
Waukesha	New Berlin	06/29-07/05	700	27	9	10	0	0

<sup>1</sup> Spotted tentiform leafminer; <sup>2</sup> Redbanded leafroller; <sup>3</sup> Codling moth; <sup>4</sup> Obliquebanded leafroller; <sup>5</sup> Apple maggot red ball trap; <sup>6</sup> Apple maggot yellow sticky trap; \*baited red ball trap.



**EXOTIC PEST OF THE WEEK**

Giant woodwasp, *Urocerus gigas gigas*

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