

Wisconsin Department of Agriculture, Trade & Consumer Protection

# Wisconsin Pest Bulletin

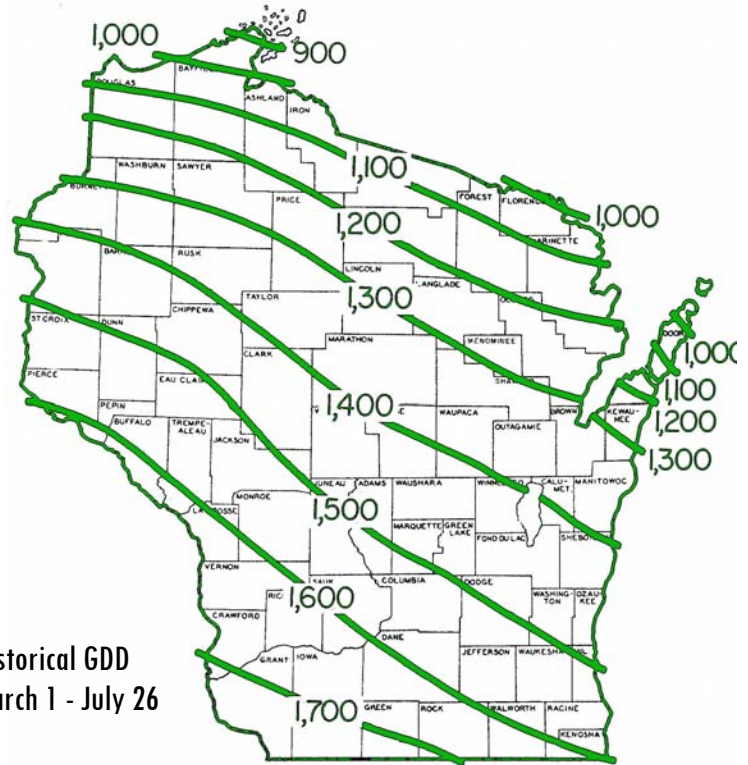
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Your weekly source for crop pest news, first alerts, and growing season conditions for Wisconsin



## Weather and Pests

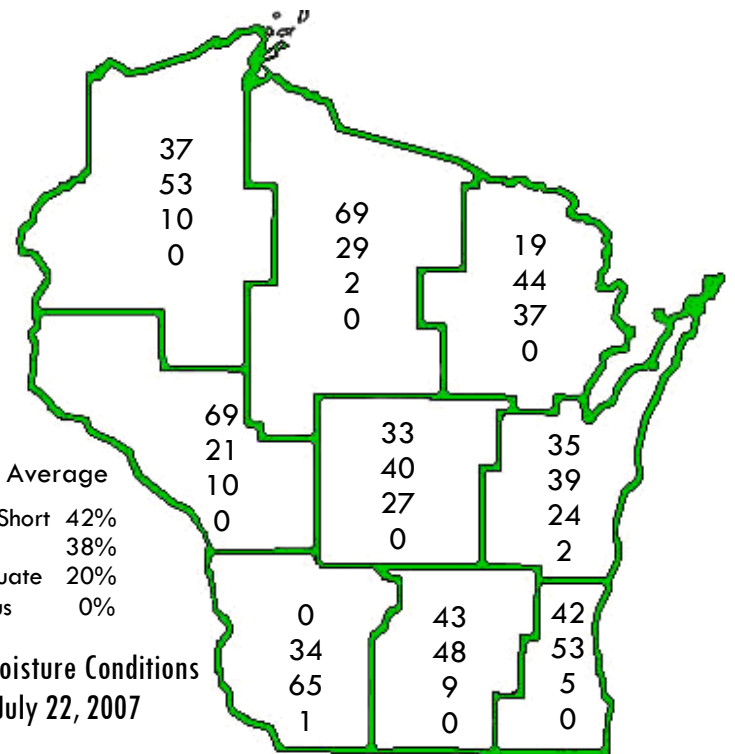
Scattered showers and storms narrowly averted a drought in certain areas of the state, but the amount of rainfall was largely insufficient and many locations continue to be dry. Most of the beneficial rains and storms have stayed west or south of the state since June, and as a result, portions of Wisconsin are abnormally dry or officially in a drought. As of July 22, soil moisture conditions were short or very short for 80% of Wisconsin crop land. Some farmers in the northern areas will not have a second crop of alfalfa, and those who do are likely to see significantly reduced yields. Third crop alfalfa regrowth is generally sparse, yellow, and crowded with potato leafhoppers. Corn and soybean crops continue to suffer and full yield potentials will not be realized without more rain.



Historical GDD  
March 1 - July 26

## Growing Degree Days through 07/26/07 were

	GDD 50F	2006	5-Yr	48F	40F
Dubuque, IA	1783	1638	1674	1845	2907
Lone Rock	1719	1579	1608	1751	2815
Beloit	1749	1700	1662	1792	2861
Madison	1677	1536	1579	1722	2762
Sullivan	1599	1564	1562	1624	2659
Juneau	1596	1468	1527	1655	2657
Waukesha	1558	1462	1486	1622	2613
Hartford	1581	1450	1480	1647	2639
Racine	1541	1426	1425	1607	2589
Milwaukee	1537	1439	1413	1602	2586
Appleton	1554	1485	1416	1611	2580
Green Bay	1434	1378	1304	1506	2451
Big Flats	1586	1558	1514	1576	2612
Hancock	1569	1529	1487	1560	2572
Port Edwards	1559	1572	1454	1586	2579
La Crosse	1850	1769	1693	1803	2987
Eau Claire	1686	1727	1577	1688	2763
Cumberland	1537	1516	1380	1529	2545
Bayfield	1190	1197	1059	1209	2080
Wausau	1146	1394	1254	1468	2420
Medford	1400	1409	1289	1432	2371
Crivitz	1379	1331	1240	1433	2344
Crandon	1307	1255	1190	1289	2211



State Average  
Very Short 42%  
Short 38%  
Adequate 20%  
Surplus 0%

Soil Moisture Conditions  
as of July 22, 2007

## Looking Ahead

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**Soybean aphid** - Temperatures in the mid-80s were highly favorable for the rapid build-up of soybean aphid colonies during the last reporting period. Economic populations are now evident in those counties where moderate densities were observed last week. In some areas of the state, this is the final week soybean fields will benefit from an insecticide application to control soybean aphids. Yield can still be recovered if treatments are properly timed during the R2 to R4 stages.

**European corn borer** - A modest increase in European corn borer moth activity was registered at black light trap sites, and egg laying continues in susceptible crops. High black light trap counts for the week were 44 moths at Arlington, and 37 moths at Mazomanie and Sparta. All other trap locations reported counts in the single digits. Peak flight activity could be registered at southern and central locations where 1,733 GDD (base 50°F) accumulate in the next week. Continue to scout for eggs and early instar larvae at this time. The treatment window for second generation European corn borers remains open until 2,100 GDD have been reached.

**Corn rootworm** - Emergence of adults continues. Individual fields in the central and west central regions have an average of 0.8 to 3.3 beetles per plant, but current populations in most fields are close to 1.4 beetles per plant. Continuous corn fields should be examined a minimum of three times at 7 to 10-day intervals from August to early September. A count of 0.75 or more beetles per plant during any one of the three scouting trips indicates the potential for larval root injury the following year, provided egg laying success is good and overwintering egg survival is normal.

**Western bean cutworm** - The first larval injury of the season was detected in a sweet corn field near Mazomanie last week. The grower who discovered the infestation described the larvae as being light brown and very large. No larvae could be found in the same field this week, which suggests most have dropped to the ground to construct an overwintering cell. This infestation came as no surprise after a nearby black light trap registered counts of 51, 58 and 44 moths each week since July 12. However, the advanced stage of larval development was unexpected. At this time mid- to late instar western bean cutworm larvae should be detectable in corn tassels and ears throughout the southern one-half of the state. Pheromone trap counts indicate populations are likely to be higher in the central counties, specifically Green Lake County, where a total of 251 moths have been captured since July 12.

**Two-spotted spider mite** - Soybean fields in the central districts of the state contain varied populations of this pest. According to reports from cooperators, two-spotted spider mites are beginning to appear in Monroe County fields, and some Manitowoc County soybean fields were already

treated. Some Adams and Juneau County fields were observed to contain mites on 10% of the plants. The majority of the damage was noted at the field margins, near roadside grasses. Many more soybean fields will require treatment if significant rainfall is not received soon.

## Forages

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**Potato leafhopper** - Nearly all third crop alfalfa regrowth surveyed in the central and west central counties had fairly high or economic populations of adults and nymphs. Counts averaged 2.1 to 6.4 per sweep in 8-10 and 12-16 inch fields in Adams, Juneau and Marquette counties, and 1.9 to 7.7 per sweep in 10-12 and 14-16 inch fields in Jackson and Monroe counties. A report from the DATCP survey specialist in Stevens Point indicated very low counts averaging 0.1 to 1.0 per sweep in a limited number of 8-10 inch and 12-14 inch fields in Shawano and Waupaca counties, possibly the result of recent spraying. Exceptional central and west central fields contained as many as 21 leafhoppers per sweep. Yellowing in these areas was moderate to heavy, with hopperburn ranging from 10-88%. Routine scouting is advised as long as hot, dry conditions continue to promote the rapid development of this pest.

## Corn

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**Grasshoppers** - Relatively high numbers of grasshoppers are present in the margins of many Adams, Juneau and Marquette County corn fields. The large, ragged holes chewed by grasshoppers are similar in appearance to the foliar feeding by armyworms, and the two should not be confused. In heavily populated fields, adult and nymph grasshoppers are usually very active and readily observed. If armyworm larvae are the offending defoliators, larvae and frass can usually be found by examining a small number of the affected corn plants. The differential grasshopper was the most common species noted in the central counties, and comprised about 35% of the population.



Grasshopper defoliation on corn

Krista Hamilton DATCP

**European corn borer** - The emergence of moths has accelerated in the past week. Ten black light trap sites reported counts ranging from 0-44 moths for the period of July 20 to 27, with the highest count registered at Arlington in Columbia County. The degree day model for European corn borer predicts peak flight activity, or 50% emergence of the summer generation of moths, around 1,733 GDD (base 50°F). This point was surpassed near Janesville, Lancaster, and Sparta by July 26. Relatively large numbers of moths should emerge near Madison and Eau Claire around July 29 and near Wausau around August 8, as the peak flight period approaches in those areas. The treatment window for second generation European corn borer larvae remains open until about 2,100 GDD, or roughly August 4 near La Crosse, August 11 near Beloit, August 12 near Madison, August 16 near Port Edwards, and August 19 near Wausau.

**Northern corn leaf blight** - Scattered lesions on the middle leaves of occasional corn plants were observed in Dane, Juneau, and Monroe County corn fields. Northern corn leaf blight is characterized by long, gray to tan, cigar-shaped lesions. These lesions may cover a considerable amount of leaf area if infection occurs before tasseling, leading to yield loss due to disruption of photosynthetic capacity. Northern corn leaf blight has the potential to increase late in the growing season on susceptible corn varieties.



Northern corn leaf blight lesions Krista Hamilton DATCP

**Common rust** - A report from the Lodi Canning Company indicated that this fungus (*Puccinia sorghi*) has been a significant problem in sweet corn this season. Fungal diseases such as common rust generally do not appear until after silking, making economic injury uncommon. However, fungicide treatments were applied to several fields in the Lodi area earlier this month to control rust symptoms. Most hybrid corn varieties are selected for some resistance to a wide range of leaf blights before being marketed. Sweet corn, with a narrower genetic base and a breeding process complicated by the need to satisfy a host of quality characteristics, is often susceptible to various leaf disease, including common rust. The occurrence of rust varies widely from year to year,

according to weather and corn traits. Conditions this season evidently have been conducive to its development.



Common rust on corn Krista Hamilton DATCP

**Western bean cutworm** - Captures in pheromone traps generally declined this week. The peak in moth emergence should have occurred in all areas of the state, except the north central and northeast regions. As flight subsides in southern and central Wisconsin, egg laying is expected to slow and localized populations should transition into the larval stages. Larval infestations are expected to be very light in most fields. The exception may be near Princeton in Green Lake County where a Pioneer Hi-Bred representative reported captures of 129 moths between July 20 and 25, and 122 moths between July 13 and 19, for a total of 251 western bean cutworm moths. Nightly captures at this location ranged as high as 50 and 83 moths on July 12 and 20, the highest numbers documented since the start of monitoring this pest in 2004. The high black light counts registered at Mazomanie since early July were an accurate predictor of subsequent larval damage in a sweet corn field within several hundred feet of the trap. The grower at the Mazomanie farm discovered large, full-grown larvae in numerous ears last week, and noted significant feeding injury to the ear tips. No larvae were detected this week, which suggests some have reached the 5<sup>th</sup> instar and ceased feeding.



Western bean cutworm larva Krista Hamilton DATCP

# Soybeans

**Soybean aphid** - Preliminary results of the annual survey to document peak soybean aphid populations indicate **high** or economic densities for the west central district and portions of the southwest, south central, and central districts, **moderate** populations for much of the central district, and **low** or non-economic populations for the southeast (with the exception of Walworth County), east central, northwest, and northeast districts. Surveys revealed a large geographic area north and west of the Wisconsin River, and south of State Highway 29, where economic levels of soybean aphids predominate. This area includes Crawford (899 aphids per plant), Richland (1,071 aphids per plant), Vernon (253 aphids per plant), La Crosse (744 aphids per plant), Monroe (808 aphids per plant), Juneau (295 aphids per plant), Jackson (618 aphids per plant), and Wood (332 aphids per plant) counties. Columbia and Marquette counties also had high county average soybean aphid densities of 810 and 292 aphids per plant, respectively.

Economic soybean aphid infestations were detected in a low number of fields in most of the nine agricultural districts, despite generalized regional trends. For example, the average number of soybean aphids per plant was 56 for the entire southeast district, but two of the five fields examined in Walworth County had economic densities of 293 and 346 aphids per plant.

As of July 26, a total of 72% of the 198 fields examined as part of the annual survey averaged fewer than 100 aphids per plant, 10% averaged 101 to 250 aphids per plant, 9% averaged 251 to 500 aphids per plant, and 9% averaged greater than 501 aphids per plant. The highest average documented was 3,250 aphids per plant in a Columbia County field. Approximately 44% of the soybean fields examined were at full bloom (R2), 38% were at beginning pod (R3), and 18% had reached full pod (R4). Survey results are subject to change as more data is collected, and averages will not be finalized until remaining fields in the north central district are examined.

**Bean leaf beetle** - Pod feeding and clipping by the summer generation of bean leaf beetles is a distinct possibility in fields under drought stress. In extremely dry soybean fields, bean leaf beetles are more likely to seek moisture from the succulent pods as leaves desiccate and curl up in the daytime heat. Adult bean leaf beetles were noted in low numbers in all of the Adams, Jackson, Juneau, and Monroe County fields sampled earlier in the week. Defoliation was light, ranging from 5-15% on no more than 25% of the plants, and no pod damage was observed.

**Japanese beetle** - Moderate numbers of this insect were observed mating and feeding in Adams County soybean fields. Aggregations of three to four beetles per leaf were noted, and some individual leaves were so severely skeletonized that virtually no green tissue remained. The incidence or total number of plants affected was low, and

did not exceed 9%. No more than 20% defoliation by Japanese beetle or any soybean defoliator should be tolerated between the bloom and pod fill stages of development.



Japanese beetle on skeletonized soybean leaf Krista Hamilton DATCP

**Grasshopper** - Populations are high in scattered soybean fields in the west central and central districts (and probably elsewhere). Feeding damage was particularly severe in the Juneau County fields examined, and ranged from 22-40%. As mentioned, the economic threshold for grasshoppers and other leaf feeding insects in soybeans is 20% defoliation.



Grasshopper on soybean leaf

Krista Hamilton DATCP

## Weeds

**Giant ragweed** - The mention of ragweed brings to mind itchy, watery eyes, sneezing, and the range of allergy symptoms triggered when ragweed pollen is shed in late summer and early fall. For agriculturalists in Wisconsin, common ragweed (*Ambrosia artemisiifolia*), and particularly giant ragweed (*Ambrosia trifida*), are major nuisances for reasons beyond their irritating wind-borne pollen. Giant ragweed has become, "an increasing problem over the past decade," according to UW-

Extension Weed Scientist Chris Boerboom, and DATCP surveys found it to be one of the more prevalent weed species this season.

Giant ragweed has several interesting ecological features that increase its persistence and success. Researchers have discovered two genetic biotypes that occur in the Midwestern states: one that has a very rapid emergence pattern, reaching 50% emergence after only one week and 90% emergence in 20 days (Hartzler 2002), and another that is slower to emerge, requiring 6 to 7 weeks to reach the 50% emergence mark. These different adaptive strategies can give both ragweed biotypes an ecological advantage, depending on the environment they are competing within.

For the most part in field crops, the rapidly emerging biotype is easier to control since it emerges at or near planting, when most weed management programs are initiated. In contrast, only a small percentage of the slowly emerging biotype seedlings are present at planting. These later emerging individuals are able to grow unchecked while crops are still young in development. To adequately control the slowly emerging biotype, regular weed control is needed until canopy closure.

Poor herbicide control is also a growing trend with giant ragweed. Glyphosate resistance has been documented in Ohio and Indiana, and low-level resistance is suspected in Minnesota. However, some cases of poor ragweed control may be due a late herbicide application or rates too low for control of ragweed rather than resistance. Plants that have grown too large may not be killed by herbicides.



Giant ragweed

Clarissa Hammond DATCP

**Ragweed control** - An assortment of mechanical, cultural, and chemical options exist for ragweed control. Mechanical means, such as rotary hoeing and flaming are usually ineffective, while deeper tillage can be effective when the residual seedbank is small. Cultural controls, such as rotation and altering planting dates can also be effective against ragweed. Using small grains or forages in the rotation helps to suppress populations through heavy competition. Forages are beneficial since giant ragweed does not tolerate regular mowing. Extending

planting dates and tilling emerged plants will help reduce populations of the rapidly emerging biotype.

Effective chemical control relies on timing, and multiple passes may be required to adequately prevent yield loss from missed plants. Giant ragweed grows very quickly and post-emergence herbicides can be ineffective against large plants. To prevent glyphosate resistance, repeated use of the same herbicide year to year should be avoided. Be aware that some herbicides applied to soil may not persist long enough or penetrate deep enough to hit the latest and deepest emerging seedlings. Refer to the table below for a summary of control options.

Method	LEVEL OF RAGWEED CONTROL	
	Good under ideal conditions*	Poor
<b>Mechanical:</b>		
tillage	x	
rotary hoe		x
flaming		x
<b>Cultural:</b>		
crop rotation	x	
planting date	x	
<b>Chemical:</b>		
application timing	x	

\* See text for details

Reference: Hartzler, R.G., K. Harrison, C. Sprague, and L. Wax. 2002. Emergence characteristics of giant ragweed populations from Ohio, Illinois and Iowa. Proceedings of the North Central Weed Science Society. 57: 51.

## Fruit

**Apple maggot** - The red ball trap and yellow sticky board counts reported this week reflect peak adult emergence in locations where 1,600 GDD (base 50°F) have been surpassed. Apple maggot activity is expected to continue through 2,800 GDD and additional rainfall in the interim could stimulate increased emergence. Chemical sprays to control this orchard pest are justified when the economic threshold of 1 fly per unbaited trap per week, or 5 flies per baited trap per week is exceeded.

**Codling moth** - Reports since the start of the second flight of codling moths reveal wide variation in codling moth pressure among Wisconsin orchards this season. Orchards in which controls were effectively timed have minimal larval injury, while those in which organo-phosphate resistance has developed or first generation control was inadequate, have moderate to heavy infestations. Apple growers are encouraged to apply alternate chemistries to those used to control the first generation moths to prevent resistance. The economic threshold remains at 5 moths per trap per week for the second generation of codling moths. Counts this week ranged as high as 50 moths per trap, with 19 of 27 (70%) orchards reporting above-threshold captures.

**Woolly apple aphid** - Orchard IPM Specialist John Aue observed "a remarkable rise" in parasitism in the last 10 days in southern orchards that have not recently applied insecticides. High rates of parasitism and predation by cecidomyiid and syrphid flies have caused a substantial decrease in woolly apple aphid populations. The parasitoids appear to be highly sensitive to standard insecticides since portions of orchards that had been treated did not have the same high rates of parasitism.

## Vegetables

**Corn earworm** - At the start of August, sweet corn growers are awaiting the arrival of a major migration of corn earworm moths. Thus far very few moths have been registered in the 11 pheromone traps located throughout the state. Because this insect seldom overwinters north of Bloomington, Illinois and the adults are not strong flyers, corn earworm moths must rely on weather systems with strong southerly winds to migrate as far north as Wisconsin. Such weather patterns have developed over the Midwest in the past week. According to the Insect Migration Risk Forecast provided by Mike Sandstrom and Dave Chagnon at the Department of Geography at Northern Illinois University, the risk across Midwestern and plains states increased to moderate levels from July 26-27. A major migration has not been predicted, but forecasted winds and rain may prompt the northward movement of some moths. At this time, pheromone lures should be replaced weekly. To view the latest insect migration risk forecast, visit <http://agweather.niu.edu/IMRFForecast.html>.



Corn earworm moth

[www.gaipm.org](http://www.gaipm.org)

Pheromone traps are a useful way to track the migration and arrival of corn earworm moths and detect emerging infestations in sweet corn and other susceptible crops. Wire mesh Hartstack traps should be placed on the south or west edge of corn fields with fresh silks, approximately 3 to 6 feet off the ground. One trap per silking corn field is ideal, but regional reports can also be used time scouting and control efforts.

Corn earworm larvae are exceedingly difficult to control. Newly hatched larvae quickly move up the silk and into the

corn ear where they are invulnerable to insecticides. For this reason, pheromone trap counts should be used to time insecticidal treatments. A nightly pheromone trap catch of 5 moths for three consecutive nights indicates that moths are probably laying enough eggs to warrant treatment of susceptible sweet corn fields. The threshold is lowered to 2 moths per night for three consecutive nights when a Scentry trap is used. Before initiating control measures, scout fields to determine if the action threshold of >10% of silks with eggs (this applies only to plantings with fresh silks or with silks just beginning to dry) is exceeded. Refer to the University of Wisconsin-Extension Publication No. A3655 for corn earworm control recommendations <http://learningstore.uwex.edu/pdf/A3655.pdf>. Organic growers may use mineral oil on silks to prevent female earworm moths from depositing eggs.

## Nursery, Forest and Landscape

**Emerald ash borer report** - Wisconsin DNR staff have conducted visual surveys for emerald ash borer in 42 private and county campgrounds across seven counties in southeastern Wisconsin, with the exception of Marinette County. Counties surveyed for emerald ash borer thus far include Dane, Dodge, Green, Jefferson, Ozaukee, Rock, and Washington. No symptoms or evidence of emerald ash borer were detected in any of the 1,450 ash trees surveyed across 3,163 campsites. Posters addressing emerald ash borer biology and the dangers of moving firewood, in addition to handouts covering topics such as identification, history, destruction of emerald ash borer, and firewood regulations in Wisconsin were distributed to each campground during survey visits. Most of the campground owners interviewed were aware of emerald ash borer and had been monitoring the movement of firewood onto their properties. Numerous campgrounds have voluntarily chosen to adhere to DNR firewood regulations by prohibiting firewood from more than 50 miles away on the premises.

**Iris borer** - A planting of iris in De Forest, Dane County, is heavily infested with iris borer larvae measuring 1½ inches long. At present, the larvae resemble 5th instar corn borer larvae in size, but they are more tan in color. Injury varied depending on the variety of iris; some varieties were severely damaged while others nearby were apparently unaffected.

**Zimmerman pine moth** - *Dioryctria zimmermani* was found in low numbers scattered throughout a field of white and Austrian pines in Dodge County. This native moth feeds on all pines, particularly Scotch and Austrian pines, and is most common in the northern one-half of the United States, east of the Rocky Mountains.

In Wisconsin, Zimmerman pine moth overwinters in the larval stage in the crevices of bark. Larvae become active in April or early May and bore into the shoot or stem of trees. Their feeding causes a pitch mass to form at the tunnel entrance. The 1 to 2 inch-diameter pitch mass is

creamy whitish-yellow in color and mixed with sawdust-like frass. Boring usually occurs at a branch whorl on the main stem, or on shoots near the terminal leader. Zimmerman pine moth feeding can severely damage trees, killing the pine shoots or the leader.

Control of this insect in plantings with low level infestation can be accomplished by hand-pruning and destroying the injured shoots. Where Zimmerman pine moth is present in high numbers or is a recurring problem, chemical control is recommended. A long-lasting, residual insecticide should be applied in the spring when the larvae resume activity, but before they bore into trees.



Zimmerman pine moth

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



Pitch mass of Zimmerman pine moth

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

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

**Southeast region:** Anthracnose on daylily, black spot on container roses, oak leafminer on swamp white oak, fall webworm on green ash, nipple gall on hackberry, elm leaf weevil on hybrid elm and leaf curl aphids on river birch in Jefferson County.

Japanese beetle feeding damage on mock orange, phyllosticta on spirea, powdery mildew and leaf hoppers on lilac, cedar hawthorn rust and cedar apple rust on hawthorn, Fletcher's scale on arborvitae and yew,

anthracnose and shothole on purple sand cherry, tip borer on viburnum, webworm on redbud, flea beetle on willow, scab on crabapple, island chlorosis and nipplegall on hackberry, guignardia on horsechestnut, scab and mites on crabapple, septoria and golden twig canker on pagoda dogwood, phomopsis on juniper, cytospora canker on Colorado blue spruce, dothistroma needle blight on Austrian pine, oystershell scale on lilac and plant bug on ash in Kenosha County.

**East central region:** Needleminer, rhizosphaera, and spruce needle drop on Colorado blue spruce, leafhopper on maple and chlorosis on oak in Fond du Lac County.

Phyllosticta on maple, applescab on crabapple, oak leaf blister, oak galls and eriophyid mites on swamp white oak, petiole borer, tar spot, and bladder gall on Norway and sugar maple, leafminer on whitespire birch, phyllosticta and powdery mildew on serviceberry, eastern spruce gall adelgid on white spruce and shothole on Canada red cherry in Manitowoc County.

Powdery mildew on smooth penstemon and columbine, thrips on butterfly weed, leaf miner on columbine, leaf hopper on maple and apple, phyllosticta on serviceberry, guignardia on horsechestnut, cedar hawthorn rust on hawthorn, black knot on Canada red cherry, spidermites on swamp white oak, plant bug damage on honeylocust, canker on greenspire linden, oystershell scale on patmore ash, nipple gall on hackberry, needleminer on arborvitae and cottony maple scale on maple in Brown County.

**Northeast region:** Potato leafhopper damage on autumn blaze maple, spruce needle drop, eastern spruce gall adelgid and spruce rust on Colorado blue spruce, powdery mildew on monardia, plant bug on ash, eriophyid mites on birch, bronze birch borer on crimson birch, white pine blister rust on white pine, spidermites on daylily, apple scab on snow drift crabapple and verticillium wilt on sugar maple in Oneida County.

**Reminder:** Mark your calendars for the 2007 Joint WNA / WCTPA Field Day on Friday, August 10 at Northern Christmas Trees & Nursery in Merrilan, Wisconsin.

## Black Light Trap Counts through July 26

**European corn borer** - Fluctuations in European corn borer counts, as monitored by black light trap captures, are a reliable indicator of the timing and magnitude of seasonal moth flights. The information derived from black light trap reports is most useful when traps are checked daily. According to Foster and Flood (2005), it is not important to spend time counting or sorting every last moth. Rather, trappers should estimate if the flight is greater than 10, 100, 500 or 1,000 European corn borer moths per night. Following is the Foster and Flood (2005) interpretation of black light trap counts:

#### Catch is less than 10 ECB moths per night

Moths probably will not lay enough eggs to justify a

treatment program, but it is a good idea to monitor silking sweet corn for egg laying, because the ECB will go there first and the crop is vulnerable.

**Catch is greater than 10 ECB moths per night for more than three consecutive nights**

Moths are laying eggs. Sweet corn that is in a vulnerable stage (pre-row tassel or later) should be monitored for adult activity. If females are being caught, egg have already been deposited in the field.

**Catch is greater than 100 ECB moths per night = "reinfestation" flight**

This is a reinfestation flight. Moths are moving to all fields to lay eggs. It is time to focus on sweet corn with an open treatment window (pre-row tassel to brown silk). If left uncontrolled, it only takes about 70 female ECB moths per acre to infest every plant with eggs. Remember, adults will live in fields up to two weeks after the last recorded flight catch. Unless they are killed, they will continue to lay eggs.

Degree day accumulations indicate that the summer flight of moths has peaked near Dubuque, La Crosse, and Beloit where 1,733 GDD were surpassed by July 25. Egg laying is expected to be heavy at this time. Growers of susceptible crops such as sweet corn, green beans and peppers should follow black light trap reports from the nearest trapping location (see table on page 149) and closely monitor fields for eggs and early instar larvae.

**Reference:** R. Foster and B. Flood. 2005. Vegetable Insect Management. 264 p.



European corn borer moth on soybean leaf Krista Hamilton DATCP

**Western bean cutworm** - Counts decreased at all locations this week, with the exception of Wausau in the north central region. Lower captures indicate that peak flight has occurred in the southern and central regions. Full-grown larvae were found damaging sweet corn ears in a field adjacent to the black light trap at Mazomanie, where relatively high counts have been noted since mid-July. Larvae were at a more advanced stage than expected. Scouting for this pest is advised in all areas where

moderate or high black light and pheromone trap counts were observed this month.



Western bean cutworm moth Jim Donnelly Ag View FS, Inc.

**Dingy cutworm** - Numbers of this species increased at the Manitowoc and Marshfield trapping locations in the central region, where 34 and 14 moths were reported, respectively. At this time last season, counts well above 100 moths in a 7-day period were registered at several sites in the central part of the state.



Dingy cutworm moth Will Cook, 2006

**Forage looper** - At the Manitowoc black light trap site, 92 forage looper moths were registered during the July 20 to 27 reporting period. This represents a seasonal high count for this species at the Manitowoc site.



Forage looper moth tdservr1.fnal.gov



## Black Light Trap Counts through July 26, 2007

	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	1	1	0	0	0	26
Reedsburg	7	—	—	—	—	—
<b>South central</b>						
Mazomanie	37	7	0	0	8	44
Arlington	44	2	16	0	1	29
<b>Southeast</b>						
Janesville	8	2	0	0	0	3
<b>West central</b>						
Sparta	37	0	1	0	0	9
Chippewa Falls	7	0	0	0	1	0
<b>Central</b>						
Wausau	0	1	6	2	0	19
Marshfield	6	5	3	1	14	1
Hancock	14	0	0	0	0	0
<b>East Central</b>						
Manitowoc	2	4	5	0	34	1

<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	9	0	26	0	0
<b>South central</b>						
Mazomanie	0	0	0	0	0	8
Arlington	0	13	0	5	0	0
<b>Southeast</b>						
Janesville	0	17	0	9	0	0
<b>West central</b>						
Sparta	0	2	0	0	0	0
Chippewa Falls	0	1	0	0	0	0
<b>Central</b>						
Wausau	0	2	0	0	0	0
Marshfield	0	14	0	27	0	8
Hancock	0	0	0	0	3	2
<b>East Central</b>						
Manitowoc	0	8	4	92	5	2

<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.

## Exotic Pest of the Week

**Apple ermine moth** - Cooperators in the DATCP apple insect trapping network are reporting captures of silvery white moths with black speckles in pheromone traps baited with Redbanded Leafroller (RBLR) lure. These moths could be one of three species: apple ermine moth, *Yponomeuta malinellus*; cherry ermine moth, *Yponomeuta padellus*; or the adult stage of euonymus caterpillar, *Yponomeuta cagnagella*. Species in the ermine moth complex are notoriously difficult to distinguish based on

morphological features. Accurate identification is most reliable if made on the basis of host plant and some larval and pupal features. Apple ermine moth larvae feed exclusively on apple and ornamental crabapple, larvae of the euonymus moth feed exclusively on euonymus, and cherry ermine moth larvae feed only on cherry trees.



*Euonymus* or spindle ermine moth, *Yponomeuta cagnagella* Ben Smart

After several seasons of trapping this exotic pest and numerous submissions to a prominent insect identifier at the Smithsonian Institute, the presence of apple ermine moth has never been confirmed in Wisconsin. In June of 2001, live larvae were found on nursery stock from Oregon state at a Columbia County nursery, but delimitation trapping in and around the nursery failed to detect any additional moths or larvae. Until taxonomic work has been performed to separate the closely related members of the genus *Yponomeuta*, surveying for the adult stage of this pest is futile.

Apple growers who annually register captures of ermine moths should continue to be alert for ermine moth webbing and larvae in June and early July, several weeks before adults begin to appear in RBLR pheromone traps. The webbing should not be mistaken for the more densely woven tents made by the eastern tent caterpillar which occur from early May to early June.



Apple ermine moth pupal cocoons

[www.inra.fr](http://www.inra.fr)

# Apple Insect Trap Counts from July 20 to 27, 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	Erickson	07/20-07/26						
Bayfield	Gellerman	07/16-07/22	15	2	0	6	0	0
Bayfield	Lobermeier	07/20-07/26	80	40	3	0	0	0
Bayfield	Bayfield Apple	07/20-07/26	585	2	1	1	0	0
Bayfield	Bayfield Apple	07/20-07/26	774	1	6	2	0	0
Brown	Oneida	07/20-07/26	900	60	18			
Crawford	Gays Mills	07/20-07/26	270	72	49	0	3	0
Crawford	Turkey Ridge	07/20-07/26	450	20	20	0	*14	6
Dane	Deerfield	07/19-07/26	630	13	14	2	1	1
Dane	Stoughton	07/20-07/26	442	22	3	9	2	3
Dane	West Madison	07/20-07/26	99	14	9	15	0	0
Dodge	Brownsville	07/20-07/26						
Fond du Lac	Campbellsport 1	07/20-07/26	25	26	5	0	0	0
Fond du Lac	Campbellsport 2	07/20-07/26	28	32	0	6	0	0
Fond du Lac	Rosendale	07/20-07/26						
Fond du Lac	Malone	07/20-07/26	50	12	8	5	1	0
Grant	Sinsinawa	07/20-07/26						
Green	Brodhead	07/20-07/26						
Iowa	Dodgeville	07/19-07/26	287	4	50	0	1	0
Iowa	Mineral Point	07/20-07/26	106	6	3	0	1	0
Jackson	Hixton	07/20-07/26	52	22	1	0		
Kenosha	Burlington	07/20-07/26	200	4	12	2	0	0
Marquette	Montello	07/16-07/24	432	0	1	0	0	0
Marinette	Wausaukee	07/20-07/26	662	20	9	0	0	0
Ozaukee	Mequon	07/20-07/26	95	1	2.5	0	*2.5 **7.6	0.3
Pierce	Beldenville	07/20-07/27	410	38	26	0	3	2
Pierce	Spring Valley	07/20-07/27	236	24	2	0	2.15	0
Racine	Rochester	07/20-07/26	0	0	9.17	0	0.75	0
Racine	Raymond	07/20-07/26	900	12	29	0	0	0
Richland	Hill Point	07/20-07/26						
Richland	Richland Ctr E	07/20-07/26	310	2	28	0	1	0
Richland	Richland Ctr W	07/20-07/26	195	21	17	0	1	0
Sauk	Baraboo	07/20-07/26	450	23	22	1	0	0
Sheboygan	Plymouth	07/20-07/26	216	170	13	3	**3	1
Waukesha	New Berlin	07/20-07/26	850	4	12	5	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; \*unbaited red ball trap; \*\*baited red ball trap.



**EXOTIC PEST OF THE WEEK**

Apple ermine moth, *Yponomeuta malinellus*

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