

Wisconsin Department of Agriculture, Trade & Consumer Protection

Wisconsin Pest Bulletin

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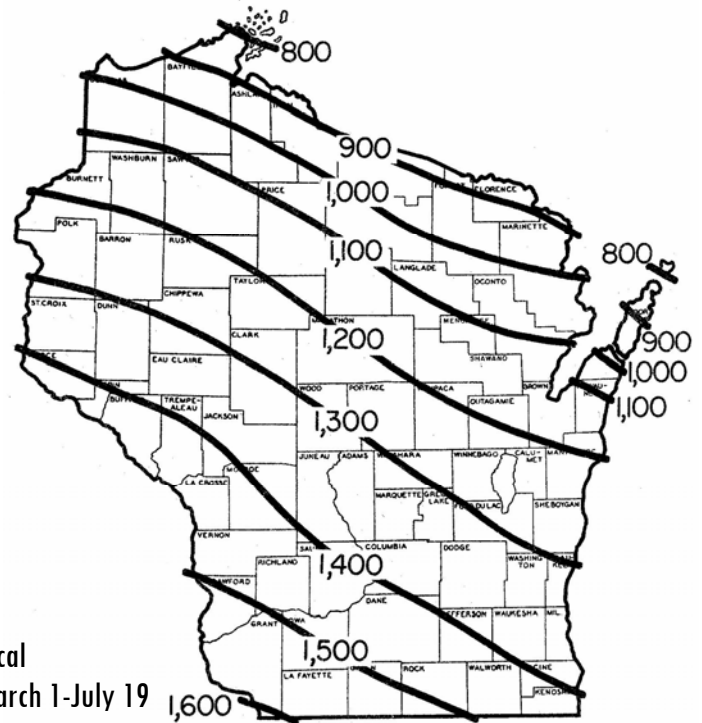
Your weekly source for crop pest news, first alerts, and growing season conditions for Wisconsin



Weather and Pests

A heat wave swept across Wisconsin and much of the U.S. in the past week, with scores of communities reporting temperatures in the triple digits. Record high temperatures were set at several Wisconsin localities, including Hayward which reached 105°F and Rhinelander which hit a historical high of 97°F. The scorching heat stressed crops and pushed those on light, sandy soils to the point of failure. In addition, damaging storms blew through the state, dropping baseball-sized hail near Poysippi in Waushara Co. and toppling corn stalks in many areas.

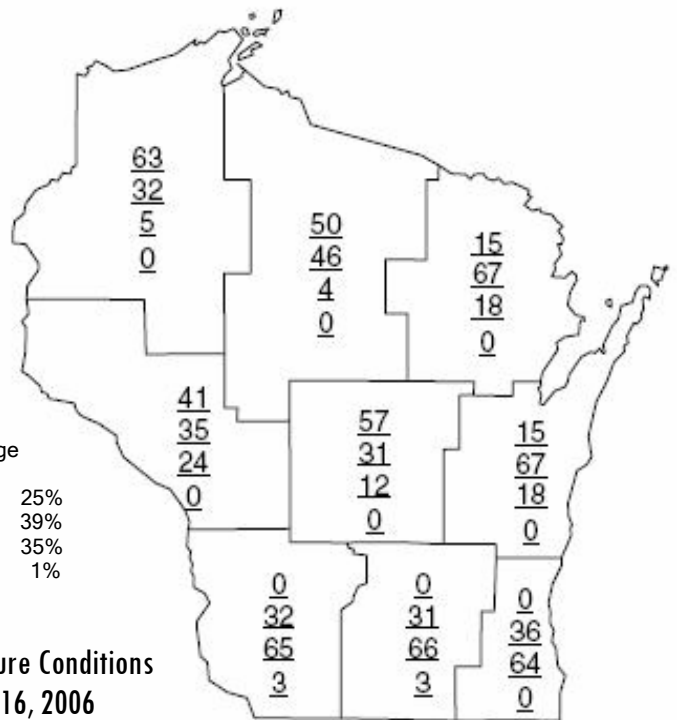
Despite the oppressive heat and severe summer storms, corn and soybeans appear vigorous in the southwest, south central and west central districts where rainfall has been intermittent but adequate. Continued moisture shortages in parts of the



Historical GDD March 1-July 19

Growing Degree Days through 7/20/06 were

	GDD 50F	5-yr Ave	Sine 48F	40F
Dubuque, IA	1505	1518	1481	2485
Lone Rock	1444	1451	1425	2398
Beloit	1564	1507	1540	2576
Madison	1408	1427	1374	2367
Sullivan	1435	1428	1408	2425
Juneau	1345	1389	1338	2312
Waukesha	1334	1357	1319	2306
Hartford	1324	1340	1311	2294
Racine	1294	1290	1302	2263
Milwaukee	1307	1274	1289	2276
Appleton	1356	1265	1299	2327
Green Bay	1253	1157	1269	2201
Big Flats	1425	1373	1327	2386
Hancock	1399	1346	1311	2354
Port Edwards	1436	1304	1346	2407
La Crosse	1619	1520	1525	2655
Eau Claire	1578	1413	1501	2601
Cumberland	1381	1216	1355	2322
Bayfield	1077	915	1074	1921
Wausau	1274	1173	1206	2174
Medford	1283	1142	1247	2190
Crivitz	1211	1092	1191	2132
Crandon	1147	1054	1084	1986



State Average

Very Short 25%
Short 39%
Adequate 35%
Surplus 1%

Soil Moisture Conditions as of July 16, 2006

northwest, north central and central districts have adversely affected crop production more than insects. The extreme heat has proven favorable for insects like the potato leafhopper and night-flying moth pests, while limiting reproduction of the soybean aphid. Injury to corn roots by corn rootworm larvae was made abundantly clear following this week's thunderstorms.

Looking Ahead

European corn borer - The second, summer flight of moths is beginning at sites where black light traps registered counts in the past week, namely near Mazomanie, Reedsburg, and Sparta. Along with the second flight come second generation eggs, which are currently being deposited in advanced southern and west central fields. The second generation treatment period has opened near Beloit, La Crosse and Eau Claire now that 1,550 GDD (base 50F) have accumulated, and will remain open until 2,100 GDD are reached. Sweet corn growers are advised to scout fields carefully once corn borer moths start flying again (see Black Light Trapping Results). Most field corn may be too mature and tough, while the sweet, succulent varieties could be magnets for gravid female moths.

Corn rootworm - The impact of heavy larval feeding on corn roots was apparent in numerous southern and west central fields following the powerful storms that swept through the state this week. Corn stalks with weakened root systems could not withstand the high winds and were either lodged or completely blown down. The severity of corn rootworm larval pressure in southeast and south central Wisconsin fields has become increasingly evident in recent days, and the injury is not limited to continuous corn. First-year corn fields planted after soybeans in areas affected by the variant western corn rootworm are also showing symptoms of larval pressure.

Corn earworm - Pheromone traps captured low numbers of moths during the last reporting period. Until the major flight occurs in August, trappers should continue to replace lures once a week. Counts this week were: Cashton 4, Chippewa Falls 5, Coon Valley 0, Janesville 0, Lancaster 3, Manitowoc 3, Marshfield 8, Mazomanie 3, Reedsburg 4, Sparta 4, Sturtevant 2, and Wausau 14.

Soybean aphid - Alert! Soybean aphid populations are likely to reach the highest densities of the season in the week ahead. Fields should be checked NOW to obtain the average number of aphids per plant, while most are still in the early reproductive stages of growth. Check several sites within individual fields to ensure a representative estimate is made. Foliar treatments for control of populations higher than the action threshold of 250 aphids per plant can now be applied in some fields. Insecticide application, if justified, is most effective when applied from R2-R3.

Twospotted spider mite - Soybean growers are advised to be alert to the possibility of mite outbreaks in soybeans. Reports of moderate twospotted spider mite infestations were received from the south central districts and low populations were observed in Juneau, Portage and Wood Co. fields; no economic populations were found. Although the heavy rains received in the past few days may temporarily reduce the

severity of spider mite problems, populations can build quickly under the right conditions.

Western bean cutworm - Captures at several trapping sites have increased to reach the highest peak thus far this season. Both pheromone traps and black light traps registered significantly more moth activity during the last seven days, which signals that egg laying is underway in susceptible crops. High pheromone traps counts for the week were: Boscobel 40, Clifton 17, Fennimore 37, Mt. Sterling 44, Platteville 34, Ridgeville 20, Sylvan 31, and Westby 32. High black light traps counts for the week were: Arlington 23, Lancaster 72, Marshfield 45, Mazomanie 23, Sparta 18, and Wausau 17. Corn should be checked for eggs on corn leaves and young larvae in the week ahead. For a complete listing of pheromone trap catches, visit the **Western Bean Cutworm Monitoring Network** Web site at

<http://www.ent.iastate.edu/trap/westernbeancutworm/>

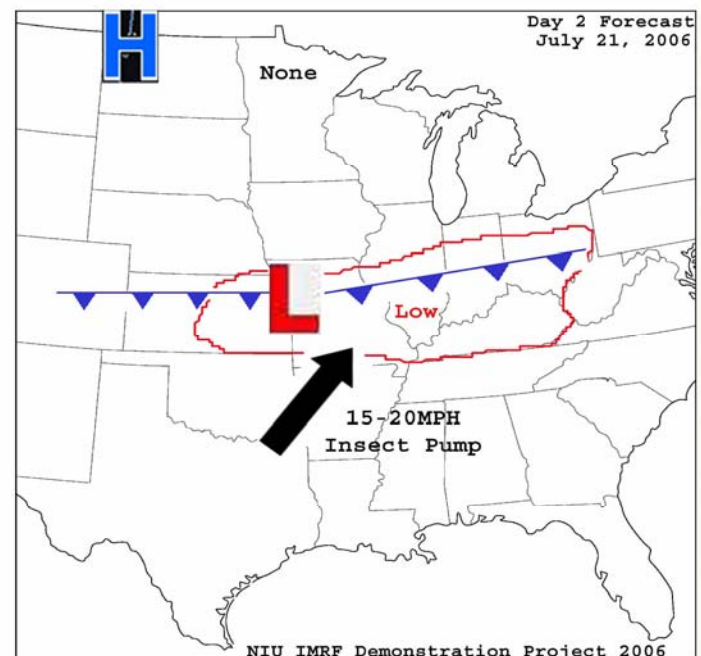
Insect Migration into Midwest Forecast

The following insect migration forecast was developed and provided by Mike Sandstrom and Dave Changnon, Department of Geography, Northern Illinois University DeKalb, IL 60115

SHORT-TERM (DAY 2 FRIDAY, JULY 21 NOON TO SATURDAY JULY 22, NOON):

Relative Risk of Insect migration into the Midwest: LOW (5-10%) - greatest risk area is along and south of US 36 including Kansas, Missouri, southern Illinois, Kentucky, southern Indiana, and southern Ohio.

The frontal boundary is expected to slow in southward movement as the new disturbance develops and moves to the east. Precipitation is expected to continue along and ahead of this disturbance especially along and south of the front throughout the Day 2 period, so a Low risk of insect migration is forecast across the southern Midwest.

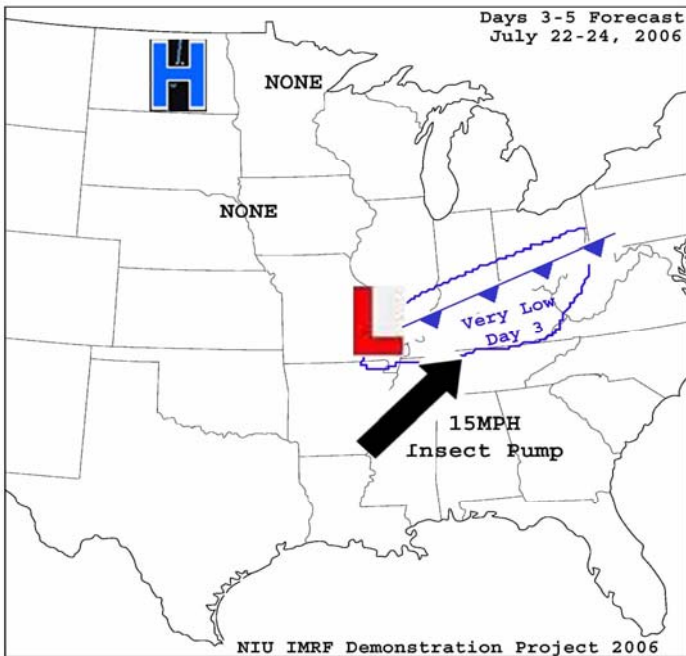


Rather weak low-level southerly winds preclude a higher risk of insect migration at this time. Further north, especially along and north of I-90, high pressure will continue to build into the region and dominate the weather, producing sunny and pleasant weather across the Dakotas eastward into northern Michigan so no insect migration risk is forecast.

LONG-TERM (DAYS 3 TO DAY 5 - SATURDAY THROUGH MONDAY):

Relative Risk of Insect migration into the Midwest: VERY LOW (2-5%) for Day 3 with the greatest risk area along and south of the Ohio River in especially Kentucky.

The weather disturbance and associated frontal boundary will continue to slide to the south and east on Day 3, reaching the Ohio River and points south. Precipitation is expected to continue on at least a scattered basis especially across Kentucky and southern Ohio, but southerly winds are expected to be rather light, so only a Very Low risk of insect migration is forecast for this area for Day 3. Elsewhere and on Days 4 and 5, high pressure will anchor itself over the Midwest, producing sunny skies and light northerly winds, so no insect migration risk is forecast.



Forage

Forage insects - Some of the yellowing in alfalfa is due to the presence of high adult and nymph potato leafhopper populations. In Juneau, Portage, and Wood Cos. averages from 0.9-8.0 per sweep were obtained. Monroe Co. also had alfalfa fields with damage due to this insect. Some La Crosse and Trempealeau Co. alfalfa fields contained lower numbers of leafhoppers, > 2.6 per sweep, and yellowing was not as apparent relative to fields in the central district. Although drought is another cause of yellowing, high sweep nets counts suggested the cause was likely potato leafhopper and not inadequate moisture levels. Alfalfa plant bug, tarnished plant bug, and grasshopper numbers are high in many central and west central fields, and are contributing to the slow growth.

Corn

European corn borer - The second flight of moths is under way in the southern and west central districts and second generation eggs are already hatching at sites where 1,550 GDD (base 50F) have accumulated. In the weeks ahead, sweet corn and late-planted field corn are likely to attract female European corn borers for egg laying. Fields that are shedding pollen and have green silks present are more attractive than those with brown silks. A prolonged second flight of moths may be in the forecast if the warm, humid conditions continue. The most effective treatment window for second generation corn borers extends from 1,550-2,100 GDD.

Corn earworm - A "consumer sample" of fresh-market sweet corn from the Spring Green area found three corn earworm-damaged ears in 13. The quality was rated as poor, as one would expect from the recent very hot weather. Sampling of sweet corn fields near Coon Valley in Vernon Co. and Mazomanie in Dane Co. found 0 and 2 larvae per 50 ears checked, respectively. Captures in pheromone traps for the period of July 14-July 20, were: Cashton 4, Chippewa Falls 5, Coon Valley 0, Janesville 0, Lancaster 3, Manitowoc 3, Marshfield 8, Mazomanie 3, Reedsburg 4, Sparta 4, Sturtevant 2, and Wausau 14.



Mature corn earworm larvae

Krista Hamilton DATCP

Corn rootworm - Symptoms of heavy larval feeding on corn roots appeared in numerous southern and central Wisconsin fields following severe thunderstorms this week. Preliminary reports and field observations indicate this could be a particularly bad year for this pest. Beetle emergence is escalating statewide, but the time to estimate rootworm beetle populations and the potential for damage to next year's corn is still weeks away. Instead, now is a good time to evaluate root conditions and to assess the extent of corn rootworm injury. The standard 1-6 root rating scale, developed by Iowa State entomologists, is provided below.

Randomly select and pull or dig up 10 widely separated corn plants from a field. After the roots have been extracted, clean them as best as possible to see the roots and rootworm injury clearly. Examine the roots for the overall amount of injury,

and rate each root system according to the 1-6 system. Add all of the ratings of roots from an individual field, and divide by the number of roots examined to obtain an average root rating for the field. Growers should not see more than a few roots pruned back to within 1.5 inches of the plant stem. A low root rating, usually 3 or less, indicates that rootworm levels are low or an insecticide applied earlier has adequately protected the roots.

ROOT RATING SCALE

1. No injury or only minor feeding scars.
2. Some roots with feeding scars, but no roots pruned off to within 1.5 inches of the plant.
3. Several roots pruned off to within 1.5 inches of the plant, but never an entire node.
4. One node of roots (or equivalent) pruned off to within 1.5 inches of the plant.
5. Two nodes of roots pruned off to within 1.5 inches of the plant.
6. Three nodes of roots pruned off to within 1.5 inches of the plant.

There are no treatment options for the current crop, regardless of the damage detected. However, rating this year's corn will help assess the effectiveness of chemical treatments, provide some indication of the potential for next year's rootworm population if planting back to corn is being considered, and provide a warning of the possible presence of the variant corn rootworm if the current crop is first year corn.



Lodged corn plants

www.kingstonfeedandfarm.com

Western bean cutworm - Flight activity of western bean cutworm moths escalated this week at Wisconsin pheromone trapping sites. The highest pheromone trap count of 44 moths was registered at Mt. Sterling in Crawford Co., while the highest black light catch recorded was 72 moths at Lancaster in Grant Co. According to the degree day model for western bean cutworm, 25% emergence is expected at 1,319 GDD, 50% emergence is expected around 1,422 GDD, and 75% emergence is expected at 1,536 GDD (base 50F).

Increased moth activity means increased mating and egg laying is occurring. In the week ahead, crop scouts are advised to be on the lookout for western bean cutworm eggs and larvae when sampling for other corn pests. Young larvae found in the tips of corn ears could be either western bean cutworm or corn earworm. Western bean cutworm larvae are distinguished by the following features:

- Three short dark stripes running lengthwise on the segment directly behind head
- Dark brown color with light diamond shaped dorsal markings when young
- Gray to pinkish-brown when full grown
- More than one western bean cutworm larva may be present in a corn ear

In corn, check 20 consecutive plants at five locations. The University of Nebraska recommends that if an insecticide application when 8% of the plants have an egg mass or young larvae are found in the tassel. Timing of the application is critical. If the tassel has not emerged when the eggs hatch, they will move into the whorl and feed on the developing pollen grains in the tassel. As the tassel emerges, the larvae will move down the plant to the green silks and then into the silk channel to feed on the developing ear. In the rare event that an insecticide is warranted, an application should be made when 90-95% of the tassels have emerged. If the tassels have already emerged, the application should be timed for when 70-90% of the eggs have hatched. Once the larvae reach the ear tip, insecticide sprays are ineffective.

Corn Earworm Pheromone Trap Counts

	14-Jul	15-Jul	16-Jul	17-Jul	19-Jul	20-Jul
Southwest						
Lancaster				1		2
Reedsburg				4		
South central						
Mazomanie				3		0
Arlington						
West Arlington						
Southeast						
Sturtevant						2
Janesville	0			0	0	
West central						
Sparta				4		
Coon Valley						0
Cashton			4	0		
Chippewa Falls						5
Central						
Wausau	1	3		4	2	4
Marshfield				5		3
East Central						
Manitowoc			2		1	

Soybeans

Soybean aphid - The annual survey for soybean aphids and soybean viruses is in progress. DATCP's team of three

permanent staff and two summer interns are visiting R2-R4 soybean fields statewide to estimate peak soybean aphid densities and to collect leaf samples for subsequent testing for Bean Pod Mottle Virus (BPMV), Soybean Mosaic Virus (SMV), soybean rust, and potyviruses. Thus far surveys have found that aphid densities are very low relative to last year and previous seasons. However, a small number of fields with very high densities were detected in the past week and enough variability in populations exists to suggest all fields should be checked **NOW**, while most are in the early reproductive stages of growth. Insecticide application, if needed, is most effective when applied from R2-R3.

According to recent research by Myers, Hogg and Wedberg (2005), insecticide application at the R3 stage was the most consistent treatment in increasing yield. Spray applications made at R4 or beyond were too late to prevent feeding damage. In addition, at R4 or later aphid populations often decline naturally, and foliar sprays lose their effectiveness as the canopy fills out. Soybean aphids surviving on the lower leaves may lead to more recolonization on the upper plant foliage following an untimely insecticide application.

Examinations of soybean fields in the past week found very few fields with above-threshold (>250 per plant) populations of aphids. Following is a regional summary of soybean aphid survey results by statistical reporting district:

Southwest district - Soybean aphid were practically nonexistent in southwestern Wisconsin fields. Populations ranged from 1-9 per plant in Iowa Co., 1-6 aphids per plant in Grant Co., 0.15-3 aphids per plant in Lafayette Co., and 1-44 aphids per plant in Sauk Co.

South central district - All of the south central Wisconsin fields surveyed in the past week had low aphid densities. Dane Co. densities ranged from 1-20 aphids per plant, Columbia Co. densities ranged from 20-81 aphid per plant, Dodge Co. fields had populations from 21-47 per plant, Green Co. densities ranged from 20-52 aphid per plant, Jefferson Co. fields had 19- 31 aphids per plant, and Rock Co. fields supported aphid populations ranging from 28-57 aphids per plant.

Southeast district - One field examined in Waukesha Co. was infested with hundreds of aphids per plant--far, far higher density than any others observed in nearby fields according to the survey specialist working in that region. The field was on a south-facing slope and sandy soil, but the soybeans were not beyond R2. Soybean aphid densities in Waukesha Co. ranged from 0.4-318 aphid per plant.

West central district - In the west central district, densities were mostly low. La Crosse Co. fields had populations ranging from 73-202 per plant. Trempealeau Co. fields were the most advanced (R3-R4) and had densities ranging from 23-264 aphids per plant. Just one of five Trempealeau Co. fields had an above-threshold population of soybean aphids. One Monroe Co. field had an average of 32 aphids per plant.

Central district - In the central district, Portage Co. fields aphid densities ranged from 2-20 per plant, though one of the fields appeared to have been sprayed. Similarly, Wood Co. fields were also lightly infested with 9-19 aphids per plant. Populations in Juneau Co. fields ranged from 31-202 aphids

per plant. No above-threshold populations were detected in the central fields surveyed.

East central district - Considerable variation in aphid numbers was found among the east central fields surveyed. The highest densities were observed in Brown Co. where three fields checked had 3, 1,500, 2,000 aphids per plant, respectively. Calumet Co. populations ranged from 2-20 aphids per plant. In Outagamie Co., soybean aphid densities ranged from 23-45 aphids per plant in three fields checked and Sheboygan Co. fields had very low averages of 4-8 per plant. Soybean aphid populations in five Manitowoc Co. fields surveyed ranged from 5-96 aphids per plant, while densities in some Winnebago Co. were low, ranging from 8-10 per plant. Just two of the east central field surveyed had above-threshold soybean aphid populations.

Myers, S. W., D.B. Hogg and J.L. Wedberg. *Determining the Optimal Timing of Foliar insecticide Applications for Control of Soybean Aphid (Hemiptera: Aphididae) on Soybean*. Journal of Economic Entomology 98(6): 2006-2012.



R1 soybean plant (beginning bloom)

www.ext.nodak.edu



R2 soybean plant (full bloom)

www.ext.nodak.edu



R3 soybean plant (beginning pod)

www.ext.nodak.edu



R4 soybean plant (full pod)

www.ext.nodak.edu

Bean leaf beetle - First generation bean leaf beetle adults were responsible for a noteworthy amount of defoliation to an Ozaukee Co. soybean field. Defoliation was estimated at 5-10% on about 95% of the plants, and a count of 8 beetles in 20 feet (18 beetles in 10 sweeps) was obtained. Aside from this southeastern Wisconsin field, bean leaf beetle defoliation does not appear to be a threat to soybean production this season. Their role in virus transmission, however, may need to be revisited if a high number of soybean samples collected during surveys this week and next test positive for BPMV (an unlikely scenario given the nonexistence of BPMV in recent years).

Grasshoppers - The primary defoliators in central Wisconsin fields at this time are grasshoppers. Feeding by red-legged grasshopper nymphs was noted in Juneau, Wood, and Portage Cos. in the central district, and in Monroe, La Crosse

Trempealeau Cos. in the west central district. The numbers of young nymphs present in many fields are not alarming, but are of concern since dry conditions are affecting the growth of soybeans in most regions. No more than 30% defoliation should be tolerated prior to flowering (R1) and 20% between flowering and pod fill (R1-R4).

Fruit

Apple maggot - Increased fly activity is likely to occur in some orchards now that soil moisture levels are more favorable. According to the growing degree day model for apple maggot, peak adult emergence should occur at sites where 1,600 GDD (base 50F) are reached in the week ahead and peak egg laying is expected around 1,750 GDD. Control measures should be taken *immediately* after one fly is captured on an unbaited red ball trap and *7-10 days* after one fly is captured on an unbaited yellow board.

Codling moth - Peak second flight moth activity, and peak egg laying, is likely to occur where 1,577 GDD (base 50F) are reached in the week ahead. Insecticide application for second generation codling moth should target newly hatched larvae before they have tunneled into the fruit. Timely control of the summer brood is particularly important given the size of fruit and potential for damage. Based on degree days, the period of peak second flight activity has passed near Beloit, Eau Claire and Lac Crosse, and can be expected to occur near Cumberland by July 29, near Racine by July 31, near Wausau by August 3, near Crivitz by August 6, and near Bayfield by August 12.

Spotted tentiform leafminer - Yet another flight of spotted tentiform leafminer moths is getting underway in orchards near Beloit, La Crosse and Eau Claire where 1,523 GDD (base 50F) have accumulated. Apple insect trappers should prepare for one last round of counting thousands of moths and scouting for mines, though control of this third and final flight is seldom warranted. The action threshold, in the rare event control is needed, increases to five mines per leaf for the third generation of spotted tentiform leafminers. Scouting recommendations remain the same; look for sapfeeder mines on the undersides of apple leaves about one week after peak flight activity is registered in pheromone traps. Make control decisions based on the number of mines per leaf.

Weeds

Perennial sow thistle and musk thistle were observed shedding seeds in large quantities this week. Both plants have wind dispersed seeds, meaning that the strong storms that swept through much of southern Wisconsin helped with reproduction. When seeds land away from the mother plant, there is less competition with other seedlings during the next season, or chances of germination increase.

Perennial pasture weeds - As part two of a three part series on problem pasture weeds of Wisconsin, this weeks' focus will be on perennial species. The weeds that are focused upon in these articles are taken directly from the 2004 publication *The Dirty Dozen and Beyond - 25 Pasture Weeds of Wisconsin*, by Jerry Doll, Peggy Compton and Rhonda Gildersleeve.

Perennial plant species generally live indefinitely, spread vegetatively and/or by seed, usually flower each season, and have either spreading roots or a taproot system. In general, mowing these species will have a poor to fair effect on populations whereas herbicide applications are rated as fair to very good. Problem perennial weed species of Wisconsin include:

- Field horsetail (*Equisetum arvense*)
- Braken fern (*Pteridium aquilinum*)
- Spotted knapweed (*Centaurea maculosa*)
- Canada thistle (*Cirsium arvense*)
- Horsenettle (*Solanum carolinense*)
- Curly dock (*Rumex crispus*)
- Bittersweet nightshade (*Solanum dulcamara*)
- Giant chickweed (*Myosoton aquaticum*)
- Hoary alyssum (*Berteroa incana*)
- Goldenrod (*Solidago spp.*)
- Multiflora rose (*Rosa multiflora*)
- Prickly ash (*Xanthoxylum americanum*)
- Stinging nettle (*Urtica dioica*)

Besides using herbicides to control these species, experts recommend digging out individual plants, preferably prior to seed shed. This can turn into a laborious endeavor in infested areas. Mowing may help limit reproduction in species that spread by seed, but is not always as effective as mowing biennial or annual species. Goats have been known to eat multiflora rose and Scottish highlanders will eat prickly ash, but as for the other species, it is not commonly known that pasture animals will feed on them. More information on these weeds can be found on the UW Weed Science web page at http://ipcm.wisc.edu/uw_weeds/extension/articles/CPPerenni.htm.



Perennial sow thistle

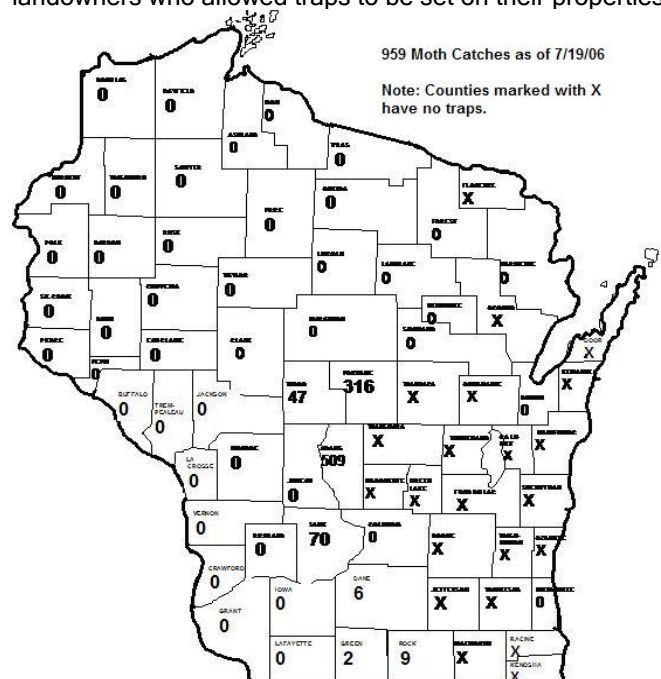
ace.acadiau.ca



Spotted knapweed

Gypsy Moth

Gypsy moth trapping program - Trappers have completed trap setting for the season in central and western Wisconsin. The final number of traps set is 31,895, which is 93% of the expected total. Again, we appreciate the cooperation of landowners who allowed traps to be set on their properties.



Multiflora rose

www.duke.edu

Trap checking has started in counties south of Highway 10. As of July 19, a total of 959 moths have been caught, mainly in the central part of the state. Moths have been reported to be flying as far north as Bayfield and Douglas Cos. Trap checking in counties north of Highway 10 will start on July 24. See map below for counties with current moth catches.

Trap checks will continue for three weeks. After this period, trappers will spot check traps to determine when the moth flight has ended. Trap take down will start in mid- to late August.



Gypsy moth trap check

Adrian Barta

Gypsy moth Slow The Spread program - The 2006 gypsy moth Slow The Spread treatment program conducted the final sprayings of the year with Pheromone Flakes on July 19 and 20 in Ashland, Bayfield and Iron Cos. Overall, the Slow the Spread program treated 87 sites in 22 central and western Wisconsin counties in 2006, totaling 168,920 treatment acres. The Wisconsin DNR also completed gypsy moth suppression spraying in the eastern half of the state for 2006 at the end of May.

Spray maps and updates, as well as pictures, information and links to other Web sites regarding the gypsy moth are available at www.datcp.state.wi.us. Click on the Gypsy Moth link under Popular Topics.

Forest and Landscape

Alternaria leaf blight/leaf spot - A genus of fungi with numerous species, many of which cause disease. In general, the pathogen is first blown in from plant debris or on bark. The fungus may enter the plant by direct penetration, by growing through the stomata, or through a wound. Usual symptoms of Alternaria infection are necrotic spots or spreading dark lesions. The lesions can either remain small or expand into large blotches. Concentric circles (rings) are often noticeable within the spots and lesions are often surrounded by a yellow halo. During humid weather, sporulation of the fungus may be abundant, giving the lesions a black, dusty appearance.

Alternaria is often considered a secondary invader, but can also act as a primary pathogen. To control these diseases, a fungicide may be applied as a preventative method, where labeled products are available. It is also important to maintain adequate spacing and weed control between plants to allow adequate airflow for rapid drying. Removing and destroying plant debris will also decrease inoculum.



Alternaria on tobacco

www.forestryimages.com

Oak leaf blister (*Taphrina caerulescens*) - A fungal disease which causes localized overgrowth and distortion of leaves. Oak leaf blister infects growing leaves in the spring. Expanded leaves are not susceptible. The fungi produce a single layer of spores (ascospores) on the host surface, appearing as a granular, or sometimes glistening, deposit, usually white or translucent. This is usually found on the concave surface of the blister, or bulge. The spores are discharged in late spring to midsummer and the diseased plant tissue dies soon afterward. Spores then produce the next generation of spores which overwinter on twigs or among bud scales. When the buds open the following spring, the cycle begins again.



Leaf blister on oak

www.forestryimages.com

Other nursery inspection finds this week include:

- **Southeast region:** Hosta virus X on 'Blue Cadet', 'Sum n' Substance', and 'Lemon Lime' hosta varieties in Walworth Co. Pestalotia tip/twig blight on arborvitae in Kenosha Co. Rhizosphaera needlecast on spruce, phomopsis canker on arborvitae, phyllosticta leaf spot on crab apple in Racine Co. Fall webworm on autumn purple ash, aphids on white ash, leafhopper on freeman maple, septoria leafspot on variegated dogwood in Dodge Co. Eastern spruce gall adelgid on white spruce in Washington Co.
- **Northeastern region:** Sphaeropsis tip blight and eastern pine shoot borer on scotch pine in Lincoln Co.

Exotic Pest of the Week

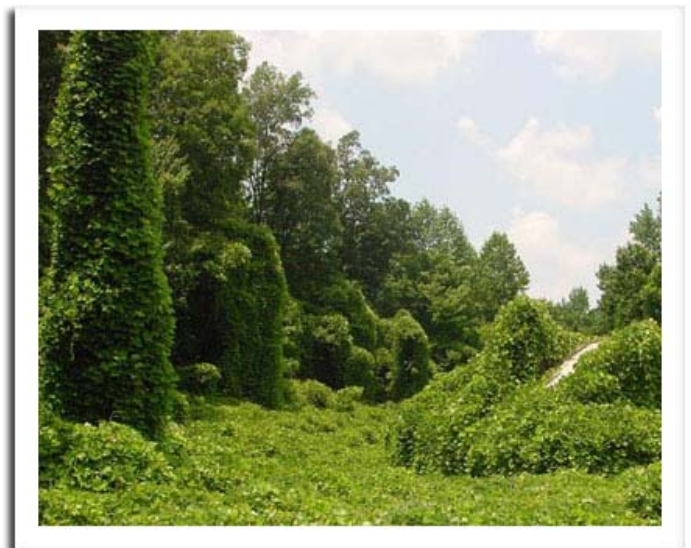
Kudzu (*Pueraria lobata var. montana*) - Kudzu is a perennial vine from the legume family. Wandering from its native habitat in eastern Asia, this exotic plant now covers millions of acres in the southeastern part of the United States. Recently it has been found as far north as Illinois and as far west as Washington State, but these populations remain relatively small in comparison to those in the southeast. Kudzu thrives on many soil types and grows best in full sun.

Originally, kudzu was introduced for the 1876 Centennial Exposition in Philadelphia and the 1884 World's Industrial and Cotton Centennial Exposition in New Orleans. The new wonder plant was intended as a forage crop, an ornamental shade plant and an erosion control measure. From 1935 to the 1950s, southern farmers were encouraged to plant kudzu to control soil erosion, while members of FDR's Civilian Conservation Corp planted kudzu on several thousand acres during the Great Depression. The invasive qualities of this plant were realized in the early 1950s, but by then kudzu had established itself in many areas.

Ecologically, kudzu creates concern because of its ability to move into an area and crowd out other plants, girdle trees and crush branches and shrubs under its weight. This aggressive plant can grow up to a foot a day, sometimes reaching lengths of 60 feet per season. It mostly spreads vegetatively, but will produce small numbers of seeds. The risk of establishment in Wisconsin is relatively low because kudzu does not withstand frost and freezing conditions well. However, though the above-ground vegetation will be killed off, deep roots may be able to survive winter conditions, especially if our winters continue to be mild. The nearest known patch of kudzu is on railroad property in Evanston, Illinois, a northern suburb of Chicago.

Kudzu has a semi-woody vine with alternate and compound deciduous leaves. The leaves are approximately 4" across and are usually deeply lobed and hairy at the margins. Plants will flower in late summer.

Note: This exotic, invasive species is widespread in the United States and serves as a reservoir and overwintering host plant for the Asian soybean rust pathogen.



When Kudzu takes over

Kerry Britton www.invasive.org



Kudzu

news.uns.purdue.edu



Kudzu leaf

www.nps.gov

Weekly Apple Insect Trap Counts (June 14 – July 21, 2006)

County	Site	Date	STLM ¹	RBLR ²	CM ³	OBLR ⁴	AM red ⁵	AM yellow ⁶
Bayfield	Atkins	7/11-7/17			7	32	1 (range 0-2)	
Bayfield	Erickson	7/14-7/20	3,600	0	9	77		
Bayfield	Gellerman	7/10-7/17	28	0	0	12		
Bayfield	Olsen 1	7/14-7/20	869	0	0	11		
Bayfield	Olsen 2	7/14-7/20	48	0	0	66		
Bayfield	Lobermeier	7/14-7/20	121	145	0	29	0	0
Brown	Oneida	7/10-7/17	550	20	7	4	0	0
Dane	Deerfield	7/14-7/20	182	156	1	1	0	1
Dane	Stoughton	7/13-7/20	16	35	1	0	0	0
Dodge	Brownsville	7/14-7/20	33	14	0	0	0	0
Fond du Lac	Campbellsport	7/14-7/20	75	33	4	1	0	0
Fond du Lac	Campbellsport	7/14-7/20	115	37	3	2	0	0
Fond du Lac	Malone	7/14-7/20	85	23	2.3	0	0	0
Grant	Sinsinawa	7/14-7/18			0		0	0
Iowa	Dodgeville	7/14-7/20	29	36	5	0	0	0
Jackson	Hixton	7/14-7/20	42	0	1	0	0	1
Kenosha	Burlington	7/14-7/20	100	8	3	0	0	0
Marquette	Montello	7/9-7/16	21	0	0	0	1	0
Marinette	Wausaukee	7/14-7/21	243	8	6	2	0	0
Ozaukee	Mequon	7/14-7/20	30	12	4.5	0.1	1.1 bait, 0.1 unbait	0
Pierce	Beldenville	7/14-7/20	12	18	0	0	3	6
Pierce	Spring Valley	7/14-7/21	73	38	0	0	1.5 unbait	0
Racine	Rochester	7/13-7/20	20	4	3.75	0	1.6 unbait	0.7
Racine	Raymond	7/14-7/20	213	135	8	1	0	0
Richland	Hill Point	7/12-7/17	228	33	2	1	0	0
Sheboygan	Plymouth	7/14-7/20	1260	82	6	0	5 baited	0
Waukesha	New Berlin	7/14-7/20	765	4	11	2	0	0

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

⁶ Apple maggot yellow sticky board

Weekly Black Light Trap Counts

Black light trap report - This week's black light insect trap reports documented a sharp increase in activity of the western bean cutworm at Lancaster 72, Marshfield 45, Mazomanie 23, and Sparta 18. In the week ahead, corn ears should be checked for larvae, which could be either western bean cutworm or corn earworm given the early arrival of migratory earworm moths this season. As a general rule, more than one larva per ear indicates the presence of western bean cutworm since corn earworm larvae are cannibalistic (see CORN section for images of western bean cutworm and corn earworm larvae).

In addition, the start of the second brood flight of European corn borer moths was recorded at some sites. Trap captures of corn borer moths from now until the flight peaks around 1,733 GDD will provide an estimate of the magnitude of the summer moth flight and the potential for damage by second generation larvae. European corn borer counts at north central trapping sites, including Chippewa Falls 15 and Marshfield 96, reflect continued first flight activity.

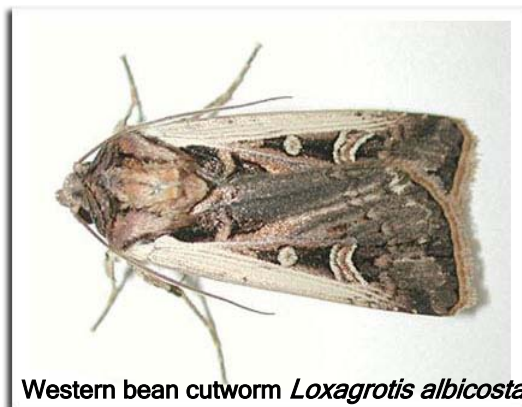
	Date	BCW ¹	CabL ²	CeL ³	CE ⁴	DCW ⁵	ECB ⁶	FA ⁷	TA ⁸	ForL ⁹	SCW ¹⁰	VCW ¹¹	AifL ¹²	WBCW ¹³
Southwest														
Reedsburg	7-13 to 7-20	-	-	-	-	-	27	-	-	-	-	-	-	-
Lancaster	7-14 to 7-20	2	0	9	0	0	0	0	8	0	0	0	0	72
South central														
Mazomanie	7-13 to 7-20	0	0	1	0	4	9	0	0	0	0	0	0	23
Arlington Station														0
Rochelle, IL														
W. Arlington	7-13 to 7-20	17	1	11	2	2	0	0	27	0	0	3	0	26
Southeast														
Janesville	7-13 to 7-19	1	0	19	0	0	0	0	24	4	0	1	0	3
East Troy	7-13 to 7-19	0	0	0	4	8	0	0	0	0	0	0	0	2
West central														
Sparta	7-14 to 7-20	0	0	0	0	1	7	0	3	0	1	0	0	18
Chippewa Falls	7-14 to 7-20	1	1	1	5	3	15	0	5	0	0	0	0	0
Central														
Marshfield	7-12 to 7-20	3	0	10	2	16	96	0	16	0	2	19	0	45
Hancock														
Wausau	7-14 to 7-20	3	1	6	7	11	14	0	6	9	12	0	0	17
East Central														
Manitowoc	7-13 to 7-19	2	0	8	0	10	3	0	19	0	0	0	0	0

¹ Black Cutworm; ² Cabbage Looper; ³ Celery Looper; ⁴ Corn Earworm; ⁵ Dingy Cutworm; ⁶ European Corn Borer; ⁷ Fall Armyworm;

⁸ True Armyworm; ⁹ Forage Looper; ¹⁰ Spotted Cutworm; ¹¹ Variegated Cutworm; ¹² Alfalfa Looper, ¹³Western Bean Cutworm

* Indicates trap malfunction during the week

Black light
trap
CATCH
of
the
WEEK





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Trade & Consumer Protection
Division of Agricultural Resources Management
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Madison WI 53708-8911



Web Site of the Week

CGIAR

The *Consultative Group on International Agricultural Research* is the consortium that runs the Future Harvest Centers, research centers which include CIP in Peru (potatoes), CIMMYT in Mexico (small grains), IRRI in the Philippines (rice) and others. Sixty-four countries and a host of private foundations working together to reduce poverty, foster human wellbeing, promote agricultural growth and protect the environment.

<http://www.cgiar.org/>

Quote of the Week

Blueberries as big as the end of your thumb,
Real sky-blue, and heavy, and ready to drum
In the cavernous pail of the first one to come!

Robert Frost (1874-1963), Blueberries

July 21, 2006



When Kudzu takes over

Kerry Britton www.invasive.org

EXOTIC Pest of the Week

Kudzu, Pueraria lobata var. montana