

Wisconsin Department of Agriculture, Trade & Consumer Protection

Wisconsin Pest Bulletin

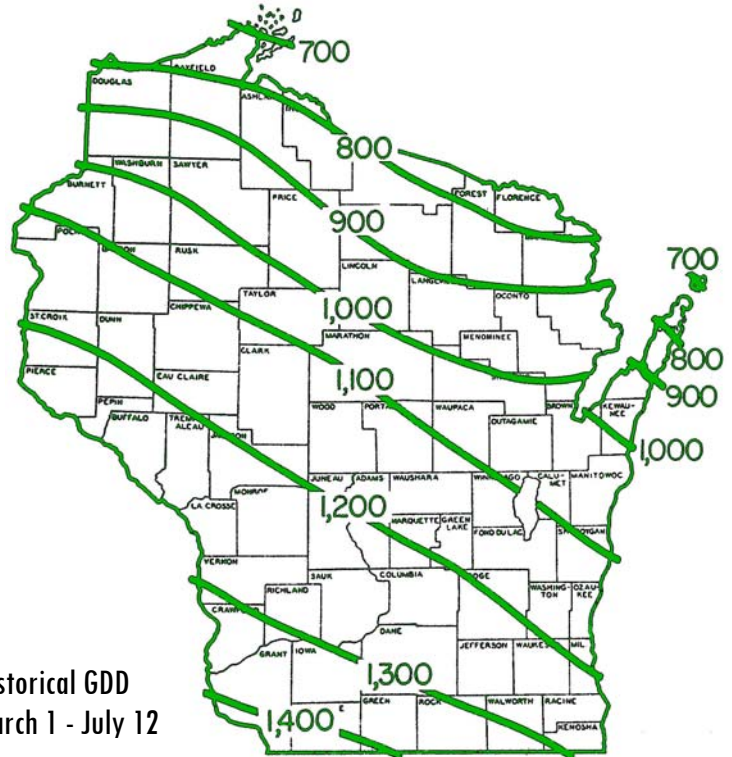
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Your weekly source for crop pest news, first alerts, and growing season conditions for Wisconsin



Weather and Pests

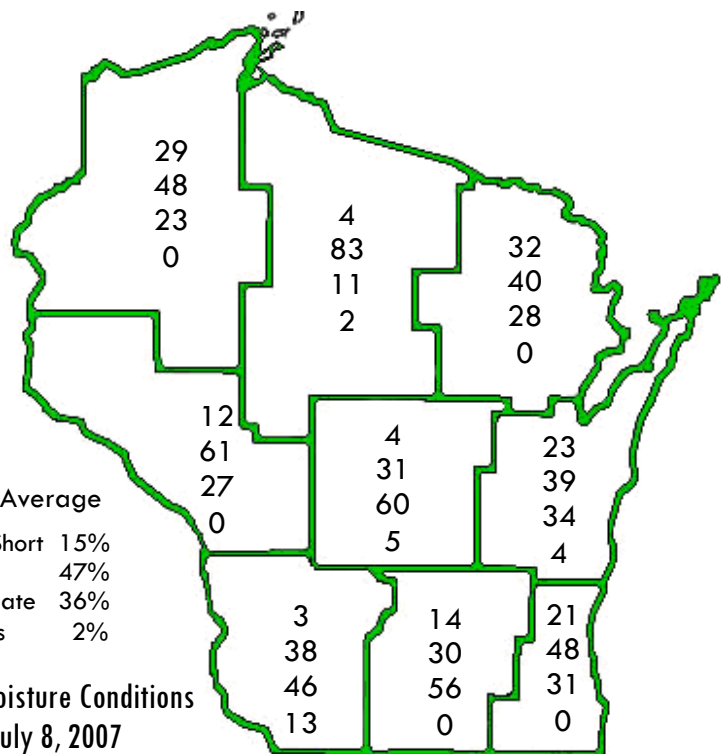
The past week began with oppressive temperatures and high humidity, but conditions moderated after a cold front swept through the state on Tuesday afternoon. Severe thunderstorms developed along and ahead of this front, producing wind damage across eastern portions of the state, wind gusts up to 55 mph in the northwest and large hail at some locations. Many areas, particularly those on sandy soils, greatly need an inch or more of rainfall. Where soil moisture is adequate, crop conditions are generally excellent. Populations of potato leafhoppers in Wisconsin alfalfa fields have surged above the treatment threshold and hopperburn can be readily found in those fields with deficient soil moisture levels.



Historical GDD
March 1 - July 12

Growing Degree Days through 07/12/07 were

	GDD 50F	2006	5-Yr	48F	40F
Dubuque, IA	1515	1301	1371	1560	2499
Lone Rock	1449	1242	1309	1475	2403
Beloit	1480	1356	1359	1496	2452
Madison	1402	1206	1280	1442	2347
Sullivan	1345	1238	1270	1343	2266
Juneau	1338	1153	1235	1369	2259
Waukesha	1309	1141	1199	1345	2224
Hartford	1326	1133	1189	1364	2243
Racine	1282	1093	1130	1320	2190
Milwaukee	1282	1107	1121	1319	2191
Appleton	1296	1156	1127	1337	2182
Green Bay	1189	1058	1024	1233	2066
Big Flats	1324	1225	1221	1324	2212
Hancock	1303	1199	1193	1292	2166
Port Edwards	1301	1237	1167	1323	2180
La Crosse	1549	1409	1373	1508	2539
Eau Claire	1403	1371	1267	1422	2335
Cumberland	1275	1189	1094	1278	2146
Bayfield	0958	0890	0805	0994	1721
Wausau	1200	1088	1050	1219	2036
Medford	1161	1099	1025	1191	1995
Crivitz	1144	1022	0973	1172	1972
Crandon	1085	0750	0945	1080	1857



State Average

Very Short 15%
Short 47%
Adequate 36%
Surplus 2%

Soil Moisture Conditions
as of July 8, 2007

Alert

Potato leafhopper - Populations have escalated to reach the highest levels of the season. Counts as high as 38 per sweep are present in some Dane County fields and the abundance of nymphs indicates very successful reproduction. Surveys in the east central region documented economic levels of potato leafhoppers in three of 10 fields sampled, and two more had been sprayed to reduce numbers of this pest. A northwestern Wisconsin crop consultant reported having recommended treatment on nearly every acre of alfalfa, both established stands and new seedings. Carryover of damaging numbers into third crop forages is a definite threat. Other susceptible hosts such as beans, potatoes and apples should be closely monitored, as dense potato leafhopper populations are likely to be forced into these crops when alfalfa fields are harvested.



Alfalfa leaflets with hopperburn

Krista Hamilton DATCP

Looking Ahead

European corn borer - The summer flight of moths has begun near Janesville, Lancaster, Mazomanie, Reedsburg and Sparta where black light traps registered counts from 3 to 14 moths in the past week. The recurrence of adult European corn borer signals that second generation eggs are being deposited in southern and west central fields. The treatment window for the second generation of larvae has opened near Dubuque and La Crosse now that 1,550 GDD (base 50°F) have been reached, and will remain open until 2,100 GDD are surpassed.

Corn rootworm - The impact of heavy larval feeding on corn roots became apparent in the southeast and northwest counties following severe storms earlier in the week. Corn stalks with root systems compromised by heavy larval feeding could not withstand the high winds and were either lodged or completely blown down. At the same time, adult corn rootworm beetles have started to emerge in greater numbers. A Sauk County corn field contained 6.9 beetles per plant (both the northern and

western species). Scouting efforts in the week ahead should be concentrated in silking fields since these are particularly attractive to corn rootworm beetles. Silk feeding is a problem only if it occurs before and during the maximum period of pollen shed. The economic threshold for this insect is 5 beetles per plant when silks are clipped back to ½ inch or less before 50% of the plants are pollinated.

Western bean cutworm - Increased captures at several pheromone trap locations reflect 25 to 50% emergence of this pest. Egg laying is underway, which suggests corn fields should be scouted for eggs and newly hatched larvae in the week ahead. High pheromone traps counts for the week were: Newark 22 and Princeton 83. High black light traps counts for the week were: Lancaster 11, Mazomanie 51, and Sparta 18. For a complete listing of pheromone trap captures during the July 6 to 12 reporting period, visit the Western Bean Cutworm Monitoring Network website at <http://www.ent.iastate.edu/trap/westernbeancutworm/>.

Soybean aphid - Economic populations have developed in scattered fields across the state. Foliar treatments for control of populations in excess of 250 aphids per plant were applied to some fields in Pierce and northern Dunn County. Soybean aphid densities must be evaluated this week, while fields are in the early reproductive stages of growth. Insecticides are most effective in reducing soybean aphid densities and minimizing resurgences when applied during the R2 to R4 stages.

Two-spotted spider mite - The characteristic white flecks or “stippling” on soybean leaves caused by this mite have grown more prevalent in the east central counties. Stippling was heaviest in the margins of the affected soybean fields, although no economic mite populations were detected. Growers in the east central area and in dry locations in the west central and northwest regions are advised to be alert to the possibility of mite outbreaks in soybeans. Under the right conditions populations can build to damaging levels in a matter of days. Treatment is suggested if several leaves have active colonies and damage prior to the R6 to R7 stages.

Forages

Potato leafhopper - Populations are high and increasing in alfalfa at the present time. Potato leafhopper damage is apparent to varying degrees in nearly all fields, with some taller second crop regrowth showing severe hopperburn. Injury appears to be most evident on older regrowth, on dry sites, and in the sparser stands.

Surveys in Columbia, Dodge and Sauk Counties showed numbers ranging from 0 to 4.3 per sweep. Economic populations were noted in just two of the 14 fields examined, but several of the fields appeared to have been sprayed recently. Nymphs of various maturities were found in all fields. An exceptional 12-14 inch Dane County field

contained approximately 38 adults and nymphs per sweep (38 times the economic threshold). Hopperburn injury in this field was estimated at 90%, and nymphs were so numerous it was difficult to obtain an accurate count.

Numbers over the east central counties ranged from 0 to 2.2 leafhoppers per sweep. Surveys in Fond du Lac County revealed populations from 0.6 to 1.5 per sweep in 3-6 inch regrowth, from 0.4 to 1.6 per sweep in 6-8 inch regrowth and 1.5 to 2.2 in 10-12 inch regrowth. Four of the six Fond du Lac County fields sampled had economic populations of adults and nymphs. Surveys in Winnebago County found two of three fields checked had been sprayed, and a 3-6 inch field with 1.1 leafhoppers per sweep (above the economic threshold of 0.2-0.5 per sweep). High populations of 0.5 and 1.2 per sweep were also noted 3-6 inch Sheboygan County fields; counts there were otherwise low to moderate in taller 8-12 inch regrowth. Numbers in Door, Kewaunee and Manitowoc counties ranged from 0.6 to 1.3 per sweep and 1 of 5 fields sampled warranted treatment. Of the 19 east central fields surveyed in the past week, nine supported economic levels of potato leafhoppers and two additional fields had been sprayed. Extrapolation of these numbers indicates roughly 50% of alfalfa fields from Fond du Lac to Door County have treatable densities of potato leafhoppers.



Potato leafhopper nymph

Krista Hamilton DATCP

Across the state in Dunn, Eau Claire and Trempealeau counties, surveys found densities ranging from 1.0 to 16.8 per sweep in 8-12 inch fields. Six of the seven fields examined had excessive populations of adults and nymphs. In Barron, Chippewa, Polk and Rusk counties, numbers ranged from 0.2 to 1.4 per sweep in 3-4 inch and 6-8 inch regrowth and treatment was justified in five of the seven fields checked. A crop consultant in the northwest reported having recommended treatment on nearly every acre of alfalfa, both established stands and new seedings.

Continue to monitor fields on a weekly basis as long as hot or dry weather conditions favor the rapid build-up of potato leafhoppers. Only 10 days are required for populations with overlapping generations to double in size. Economic thresholds for potato leafhopper are as follows: 0.2 per

sweep in 3 inch alfalfa, 0.5 per sweep in 6 inch alfalfa, 1.0 per sweep in 8-11 inch alfalfa, and 2.0 per sweep in alfalfa taller than 12 inches.



Alfalfa field with severe hopperburn

Krista Hamilton DATCP

Corn

European corn borer - The second flight of moths is underway in the southern and west central counties and second generation eggs are hatching at sites where 1,550 GDD (base 50°F) have accumulated. During the remainder of the month, sweet corn and late-planted field corn are likely to attract female moths for egg laying. The most effective treatment window for the second generation of European corn borer larvae extends from 1,550 to 2,100 GDD. The lower range of this threshold was surpassed by July 13 near La Crosse, and will be exceeded at more southern and western locations in the week ahead.

Western bean cutworm - Captures escalated this week at several Wisconsin pheromone trap sites. The highest count of 83 moths was registered at Princeton in Green Lake County, while the highest black light catch of 51 moths was recorded at Mazomanie in Dane County. Much of southern and western regions have surpassed the 1,329 GDD (base 50°F) point at which 25% moth emergence should occur. It is recommended that field scouting begin one week after a first trap catch is registered or when degree days indicate 50% emergence has taken place, usually around 1,422 GDD.

Scouting for western bean cutworm eggs next week can be integrated with scouting for second generation armyworm larvae and silk feeding by corn rootworm beetles. The upper three leaves on 20 plants should be inspected at five locations per corn field. Eggs are laid on the top side of upper leaves, frequently on the flag leaf. Newly laid eggs are initially white, but turn purple just before hatching (see images on page 124). Adult moths may be attracted to one corn hybrid over another; therefore, hybrids in different stages or with different leaf characteristics should be scouted separately. The University of Nebraska uses 8% of plants with egg mass or small larvae as the

economic threshold. If economic populations are detected, chemical sprays should be applied at 90-95% tassel emergence. In fields where tassels have already emerged, the application should be timed for when 70-90% of the eggs have hatched. Control is ineffective once larvae have moved down the silk channel to feed in the developing ear.



Newly laid western bean cutworm eggs

Marlin E. Rice



Western bean cutworm eggs just before hatch

Marlin E. Rice

Corn rootworm - Severe thunderstorms and high winds earlier in the week induced lodging in parts of the southeast and northwest. Some corn fields may lodge due to poor root development or factors other than rootworm feeding, but a large portion of the lodging observed during recent surveys was probably due to larval feeding. Root conditions and the extent of larval corn rootworm injury should be evaluated at this time. There are no treatment options for the current crop, irrespective of the severity of root injury. However, root ratings can indicate the effectiveness of chemical treatments, the potential for corn rootworm damage to multiyear corn next season, and the possible presence of the variant western corn rootworm if the current crop is first year corn.

To assess corn rootworm injury, select and pull or dig up 10 widely separated corn plants from a field. Clean the

extracted roots thoroughly to see the rootworm feeding 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 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. The standard 1-6 root rating scale developed by Iowa State entomologists is provided below:

ROOT RATING SCALE

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

Corn earworm - Pheromone traps captured low numbers of moths again this week. Trappers should continue to replace lures once a week until the major flight has passed in August. Counts this week were: Coles Valley 2, Coon Valley 3, Janesville 0, Lancaster 1, Manitowoc 0, Marshfield 2, Mazomanie 1, Westby 0.

Soybeans

Soybean aphid - Considerable variation in soybean aphid densities exists between soybean fields in the east central area and those in the west central and northwest areas. A small percentage of fields contain high populations, but most continue to support relatively light colonies for this time of year. Surveys show soybean aphid densities are much lower in the east central counties compared to those in the west. Nonetheless, the variability in populations suggests that all soybean fields should be checked this week, while most are in the early reproductive stages of growth.

Soybean fields examined in Fond du Lac, Sheboygan and Winnebago counties were 30 to 90% infested with a maximum of 20 aphids per infested plant. Soybeans in Door, Kewaunee and Manitowoc counties had noticeably lower densities, ranging from 0 to 25% and a maximum of 6 aphids per infested plant. None of the 22 eastern Wisconsin fields examined by DATCP survey specialists contained populations above the economic threshold of 250 aphids per plant on 80% of the plants.

Surveys in the west central counties found markedly higher soybean aphid densities. Soybeans in Dunn, Eau Claire and Trempealeau counties were 100% infested with a maximum of 169 aphids per infested plant. Several of these fields will likely develop economic infestations within the next two weeks. Soybean fields in Barron, Chippewa, Rusk and Polk counties were 15 to 100% infested with a maximum of 60 aphids per infested plant. A crop advisor reported that treatable levels of soybean aphids had developed in west central and northwest areas as of July 6, and that some chemical treatments had been applied in Pierce and northern Dunn County. According to his estimates, soybean aphid densities ranged from 20 to 500⁺ per plant depending on the farm, the field, and the location on the farm.

Populations unquestionably are on the increase and more fields are certain to develop economic populations in the week ahead, but thus far it has been a light season for this pest. Treatment is warranted if (and only if) 250 aphids per plant are present on 80% of the plants. Insecticide applications for control of soybean aphids are most effective when applied during the R2 to R3 stages. Research by Myers et al. (2005) demonstrated that an application at the R3 stage of soybean growth most consistently prevented yield loss, while applications made at R4 or beyond were generally too late to preclude damage. Aphid populations decline naturally after R4 and foliar sprays lose their effectiveness as the canopy closes.



Soybean aphids on soybean stem and leaves Krista Hamilton DATCP

Two-spotted spider mite - Soybean fields in Fond du Lac and Winnebago counties contained moderate populations tentatively identified as this mite. At present, there are only spotty areas affected, totaling approximately 10 to 15% of the fields. The severity of this situation may increase in some of the dry areas of the state. Affected leaves initially have a speckled appearance, later having a reddish or bronze cast and dull look, with webbing apparent and eventual desiccation and death occurring.

Reference: Myers, S.W., D.B. Hogg and J.L. Wedberg. 2005. Determining the optimal timing of foliar insecticide applications for control of soybean aphid on soybean. *Journal of Economic Entomology* 98(6): 2006-2012.

Weeds

Roadside weeds - Wild parsnip is forming seed in Columbia and Dodge counties, while spotted knapweed and wild carrot are near or just past full bloom. Both wild parsnip and spotted knapweed are extremely invasive plants that tend to create monocultures in areas where they grow. Clipping and bagging flower heads now will help to slow their spread and keep populations in check. CAUTION! Be sure to wear gloves, long sleeves and other protective gear when controlling wild parsnip. The plant sap is very phototoxic and will burn skin.



Wild parsnip forming seed

Clarissa Hammond DATCP



Spotted knapweed

Clarissa Hammond DATCP

Weeds in corn - Redroot pigweed (*Amaranthus retroflexus*), a common problem weed, was observed in scattered Dodge County corn fields earlier this week. *Amaranthus retroflexus* is a summer annual capable of prolific seed production and triggering late summer allergies. Interestingly, Native Americans used to collect the plentiful seeds to ground into flour.

Pigweed species can be difficult to distinguish from one another, especially since hybridization is common. Leaves on redroot pigweed are characterized as alternate, simple,

lanceolate to obovate in shape, with prominent veins. The taproot is relatively shallow in the ground and upper portions are red to pinkish in color.

At this point in the season, weed control in corn is complicated by plant height and developmental stage. In the more advanced fields, weeds left unchecked may have already caused yield loss, and applying an herbicide is no longer economical. Some later fields may still be at a stage where control is economical; assessments should be made on a field by field basis. Record observations on problem weed species now to create a targeted weed management plan for next year.



Redroot pigweed

Clarissa Hammond DATCP

Fruit

Apple maggot - Peak adult emergence is expected to occur in orchards where 1,600 GDD (base 50°F) are surpassed next week. Orchards from Burlington to Beldenville have reported captures of apple maggot flies since emergence began during the week of June 21 to 28. Counts ranging up to 10 flies per trap were registered at 12 of the 28 cooperating orchards in the past week. Treatment for this direct apple pest is warranted whenever the economic threshold of one fly per unbaited trap, or five flies per baited trap is exceeded (per week). In Bayfield County, the first flies of the season should begin to appear now that 900 GDD have been surpassed.

Obliquebanded leafroller - Larvae of various maturities are present in terminals and fruits in some southern Wisconsin orchards. Trees that have not been sprayed recently should be examined closely.

Codling moth - Flight activity has decreased at most monitoring sites, but localized areas within orchards may still be subject to egg laying and eventual larval injury. Orchard IPM Specialist, John Aue, emphasized the need for consistent control in these areas to prevent problems from developing in late August or early September, when growers are less inclined to spray for second generation codling moths. Next week is an opportune time to assess

injury by first generation codling moth larvae and to evaluate the effectiveness of earlier control measures. The second flight of codling moths should peak at southern and west central sites as soon as 1,577 GDD (base 50°F) are reached.

European red mite - Populations have surged in the recent heat. Careful monitoring is advised, even in orchards where miticides were applied earlier this month.



European red mite injury to leaves

www.agf.gov.bc.ca



European red mites

www.hort.uconn.edu

Woolly apple aphid - This insect is not controlled by normal orchard chemicals, therefore, colonies should be watched in the next few weeks. Occasionally populations increase dramatically in late July and August, which can lead to problems during picking in fall.

Potato leafhopper - Potato leafhoppers have reached damaging levels in non-bearing orchard blocks, according to John Aue. Non-bearing plantings are more susceptible to leafhopper injury at this time of year partially because adults and nymphs prefer the young, tender leaves, but also because these plantings usually have a lighter insecticide spray program. Merely one or two nymphs per leaf can cause leaf curling if allowed to feed for 4-7 days. Insecticides on nursery trees and in non-bearing blocks may be justified at the first sign of injury.

Nursery, Forest and Landscape

Lophodermium needlecast - Light to moderate levels of this fungus were noted on red pine in a Langlade County nursery planting and on 'Bennett Clumpleaf' white pines at a garden center in Sawyer County. *Lophodermium* needlecast is caused by the fungus *Lophodermium*, of which there are more than 60 different species. *Lophodermium* affects conifers worldwide. The most damaging species, *Lophodermium seditiosum*, attacks Scotch, Austrian, red and occasionally white pine.

Lophodermium needlecast spreads by wind-blown spores, infected needle debris, infected seedlings, or mulch made from infected trees. Spores are produced in late summer and germinate on wet green needles. They quickly grow a germ tube which penetrates the needle and then continue to grow hyphae throughout the needle during the winter months. Symptoms first appear as brown spots with yellow margins in the needles. As the spots enlarge, the needles turn brown and die, and eventually become tan or straw colored. Dead needles may be shed or remain on the tree. The affected spots on the dead needles will continue to develop into large elliptical black fruiting bodies, whether shed or attached. By the end of the summer, the fruiting bodies erupt through the epidermis of the needle and the spores are released.



Lophodermium needlecast

ctrees.cas.psu.edu

Preventative cultural controls are the most effective way to limit the spread of this disease. Plant trees to promote air circulation between trees and rows, and irrigate during the morning hours to allow needles time to dry by the afternoon. Conifers infected with *Lophodermium* needlecast may require a minimum of three to four fungicide applications from late July to October, during the primary infection period.

Other nursery inspection finds this week include:

Southeast region: Pine needle scale on Austrian pine, black knot on Canada red cherry, sawfly feeding on white ash, flatheaded apple tree borer on crabapple, anthracnose and leafminer on river birch, ash plant bug on

green ash, flea beetle on elm, eriophyid mites on swamp white oak., 'Blue Cadet' hosta virus X (HVX) and fusarium root rot on arborvitae in Walworth County.

Cedar hawthorn rust on hawthorn, phyllosticta on service berry, downy mildew on rose, septoria on variegated dogwood, bladder gall on burr oak, botrytis on geranium and guignardia on horse chestnut in Kenosha County.

West central region: Septoria on Japanese iris, alternaria leaf spot on Louisiana water iris, imported willow leaf beetle on pussy willow and rust on currant in Richland County.

Northwest region: Fireblight on 'Polka Pink' weigela, virus symptoms on 'Pee Gee' hydrangea and grey lilac, leafhoppers on assorted apple in Douglas County.

'Pilgrim' hosta with HVX, powdery mildew on common purple lilac, cedar apple rust and apple scab on brandy wine crabapple, leafhopper burn on burgundy belle maple and leaf curl aphid on summit ash in Eau Claire County.

Lophodermium needlecast on 'Bennett Clumpleaf' pine, eriophyid mites on 'Redwing' viburnum, aphids on cranberrybush viburnum, pale green weevil on assorted roses, shothole disease on prunus, cedar apple rust on Connel red apple, leaf gall on linden, HVX on 'Sadspen Blue' hosta and Tobacco Rattle Virus (TRV) on white bleeding heart in Sawyer County.

Northeast region: Phyllosticta on ash, dothiorella canker on honeylocust, frost damage on balsam and concolor fir, and sphaeropsis on red pine in Lincoln County. *Lophodermium* needlecast on red pine in Langlade County.

Gypsy Moth

Gypsy moth trapping program - The DATCP team of gypsy moth trappers has completed the trap setting phase of the program. A total of 30,291 traps were set, which is 95% of the expected total for the 2007 season. Now that traps are in place, checking has started south of Highway 10. During the next three weeks trappers will check traps for male gypsy moths and perform routine maintenance. Reports of gypsy moth flight have been received as far north as Marathon County. Trap checking is scheduled to begin south of Highway 29 during the week of July 16, and northern areas are expected to start checking traps during the week of July 23. The entire process of checking traps should extend into early August. Spot checking will resume after that time to help determine if the moth flight is finished for this season.

Black Light Trap Counts through July 12

Western bean cutworm moths began to appear in traps from Janesville west to Lancaster, and north to Marshfield and Wausau in central Wisconsin. The highest trap count

registered was 51 moths at Mazomanie; other locations reported 0 to 11 moths. These counts mark 25 to 50% emergence of western bean cutworm adults. By next week 75% of the flight will have emerged. Egg laying is underway in corn.

	ECB ¹	TA ²	BCW ³	SCW ⁴	DCW ⁵	WBCW ⁶
Southwest						
Lancaster	3	3	0	1	0	11
Reedsburg	10	-	-	-	-	-
South central						
Mazomanie	14	18	0	1	0	51
Arlington	0	1	10	2	0	3
Southeast						
Janesville	3	22	2	0	0	3
East Troy	0	0	0	0	5	3
West central						
Sparta	11	0	0	0	0	18
Chippewa Falls	3	1	0	0	10	0
Central						
Marshfield	50	8	5	5	0	3
Wausau	6	16	1	6	4	7
East Central						
Manitowoc	2	8	2	5	0	0

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

	CabL ⁸	Cell ⁹	AlfL ¹⁰	ForL ¹¹	FA ¹²	VCW ¹³
Southwest						
Lancaster	0	10	0	21	0	0
South central						
Mazomanie	0	0	0	0	0	0
Arlington	0	11	3	10	0	5
Southeast						
Janesville	0	12	0	4	0	0
East Troy	0	0	0	2	0	0
West central						
Sparta	0	1	0	0	0	0
Chippewa Falls	0	1	0	0	0	0
Central						
Wausau	0	3	0	0	0	0
Marshfield	0	17	0	21	0	9
East Central						
Manitowoc	0	4	0	0	0	7

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

¹²Fall Armyworm; ¹³Variegated Cutworm.

Moths of the second flight of European corn borer moths also began drifting into traps this week. Counts were as follows: Arlington 0, Lancaster 8, Reedsburg 10, Mazomanie 14, Janesville 3, East Troy 0, Sparta 11, Chippewa Falls 3, Wausau 6, Marshfield 50, and Manitowoc 2. The numbers registered at Marshfield and Wausau reflect late first flight activity since a total of 1,400 GDD (base 50°F) must accumulate before summer moths

appear in traps. Degree day accumulations near Marshfield and Wausau were at 1,200 as of July 12.

Exotic Pest of the Week

Chinese yam - *Dioscorea oppositifolia*, also called Chinese Yam or cinnamon vine, was brought to the U.S. from Asia in the mid-1990s for medicinal, food, and ornamental purposes. It soon escaped the control of horticulturists and became established in Ohio, Indiana, Illinois and Missouri. It is not known to occur in Wisconsin, but is listed as one of the top 16 species to be on the look-out for by the Midwest Invasive Plant Network (MIPN).

Chinese yam may be identified by opposite, heart or shield shaped leaves and a vine that winds clockwise. The flowers are small, white, arranged in spikes, and have a cinnamon odor. Reproductive bulbils, small potato like tubers, appear from June to September.

This herbaceous perennial vine invades stream sides, flood plains and ravines where it can grow to 15 feet using native plants for support. Native plants cannot develop beneath the dense shade produced by leaves of Chinese yam. Although labor intensive, removing the entire newly sprouted bulbils can limit its spread.



Chinese yam

J. Miller www.invasive.org



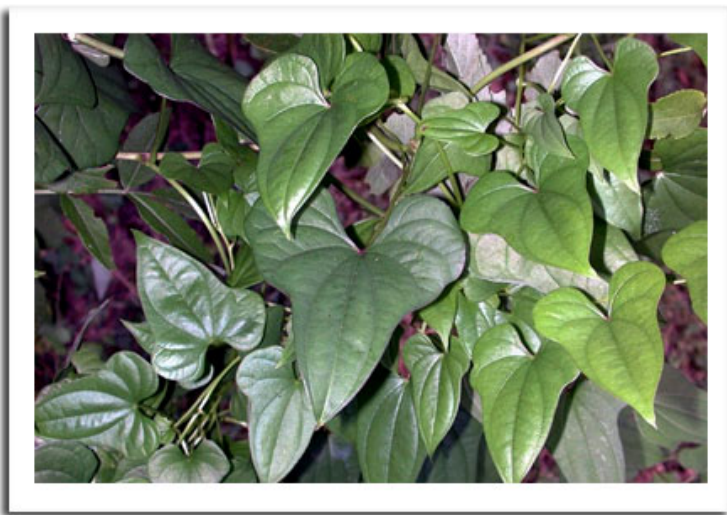
Chinese yam

www.forestpests.org

Apple Insect Trap Counts from July 6 to 12, 2007

County	Site	Date	STLM ¹	RBLR ²	CM ³	OBLR ⁴	AM red ⁵	AM yellow ⁶
Bayfield	Erickson	06/29-07/12	540	0	6	14	0	0
Bayfield	Gellerman	07/06-07/12	47	0	0	3	0	0
Bayfield	Lobermeier	07/06-07/12	140	750	39	0	0	0
Bayfield	Bayfield Apple	07/06-07/12	640	0	2	0	0	0
Bayfield	Bayfield Apple	07/06-07/12	2115	2	4	4	0	0
Brown	Oneida	07/06-07/12	650	41	10	1	0	0
Crawford	Gays Mills	07/06-07/12						
Crawford	Turkey Ridge	07/06-07/12	545	119	32	1	10	9
Dane	Deerfield	07/06-07/12	193	74	10	0	0	1
Dane	Stoughton	07/06-07/12	99	139	5	1	0	3.5
Dane	West Madison	07/06-07/12	90	0	3	0	1	0
Dodge	Brownsville	07/06-07/12	10	40	1.5	1	0	0
Fond du Lac	Campbellsport 1	07/06-07/12	42	34	1	2	0	0
Fond du Lac	Campbellsport 2	07/06-07/12	50	50	0	0	0	0
Fond du Lac	Rosendale	07/07-07/13	21	15	2	4		
Fond du Lac	Malone	07/06-07/12	230	100	5	2	0	0
Grant	Sinsinawa	07/06-07/12						
Green	Brodhead	07/06-07/12	0	9	0	0	0	0
Iowa	Dodgeville	07/06-07/12	182	23	8	0	0	0
Iowa	Mineral Point	07/06-07/12	75	75	3	0	0	0
Jackson	Hixton	07/06-07/12	160	0	2	13	0	0
Kenosha	Burlington	07/06-07/12	300	30	2	2	0.5	0
Marquette	Montello	07/01-07/08	528	6	6	0	4	0
Marinette	Wausaukee	07/06-07/12	205	25	1	0	0	0
Ozaukee	Mequon	07/06-07/11	10	6.5	0	0	*0.1	0
Pierce	Beldenville	07/06-07/12	35	0	0	0	1	0
Pierce	Spring Valley	07/06-07/13	313	6	0	3	1	0
Racine	Rochester	07/06-07/12	235	41	3.3	0	0.5	0
Racine	Raymond	07/06-07/12	673	47	7	3	0	0
Richland	Hill Point	07/06-07/11	1170	73	1	0	1.3	0
Richland	Richland Ctr E	07/06-07/12						
Richland	Richland Ctr W	07/06-07/12						
Sauk	Baraboo	07/06-07/12						
Sheboygan	Plymouth	07/06-07/12	1080	95	2	1	1	0
Waukesha	New Berlin	07/06-07/12	240	19	2	3	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 trap; *baited red ball trap.



EXOTIC PEST OF THE WEEK

Chinese yam, *Dioscorea oppositifolia*

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