Wisconsin Department of Agriculture, Trade & Consumer Protection

Wisconsin Pest Bulletin

Your weekly source for crop pest news, first alerts & weather information for Wisconsin.

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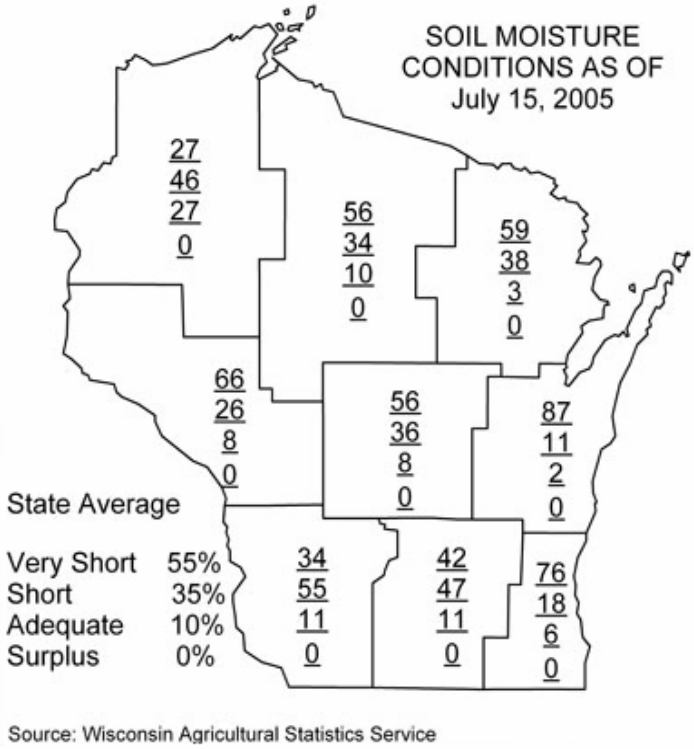
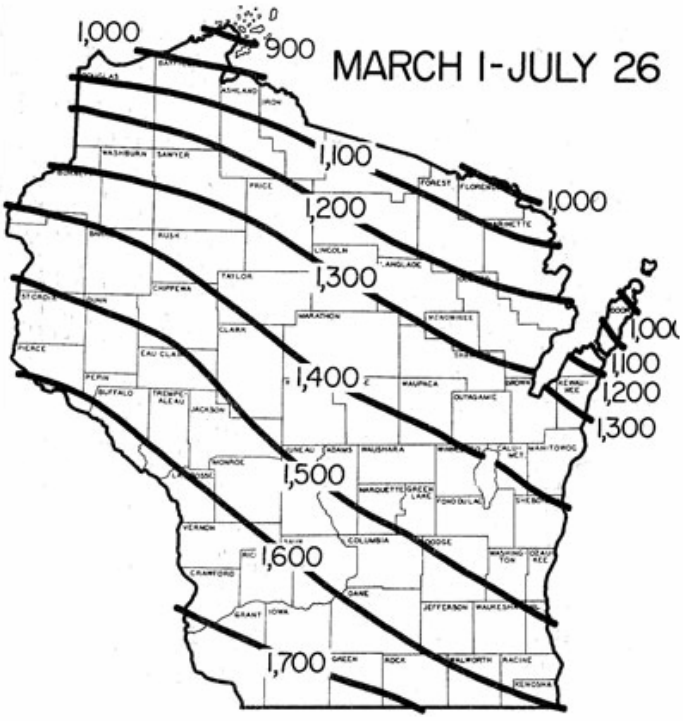


Source: Wisconsin Agricultural Statistics Service



Historical Growing Degree-Days
Accumulated Since March 1, 2005
(Wisconsin Agricultural Statistics Service)

Weather and Pests

Continued intense heat and little measurable rainfall this month has rapidly caused crop conditions to deteriorate to the point where recovery in some areas is uncertain. Small amounts of precipitation received in the past week were not enough to adequately recharge moisture-depleted soils. Some fields in regions of the state where soil moisture reserves are in good supply may pull through short-term drought conditions, but fields on lighter, sandy soils yields will be adversely impacted.

In addition, the outlook for third crop hay is bleak. Where fields have been cut recently, regrowth is at a standstill. Vast acres of second crop alfalfa are severely yellowed from hopperburn and laden with excessive populations of potato leafhoppers. In several east-central counties, two-spotted spider mites and soybean aphids are adding to an already dire situation for soybean fields. Soybean aphids appear to be holding their own through the drought, and many fields are now supporting densities greater than 600 soybean aphids per plant.

Growing Degree Days through July 21 were:				
Site	GDD*	2004 GDD	Base 48	Base 40
SOUTHWEST				
Dubuque, IA	1670	1524	1558	2715
Lone Rock	1604	1405	1535	2611
SOUTH CENTRAL				
Beloit	1655	1476	1532	2679
Madison	1623	1377	1559	2638
Sullivan	1629	1375	1450	2641
Juneau	1610	1344	1518	2610
SOUTHEAST				
Waukesha	1543	1321	1481	2522
Hartford	1534	1284	1509	2400
Racine	1443	1250	1440	2383
Milwaukee	1426	1210	1411	2255
EAST CENTRAL				
Appleton	1434	1087	1434	2637
Green Bay	1334	1013	1348	2256
CENTRAL				
Big Flats	1557	1233	1485	2533
Hancock	1527	1190	1455	2491
Port Edwards	1487	1122	1441	2430
WEST CENTRAL				
LaCrosse	1666	1430	1564	2713
Eau Claire	1540	1240	1527	2527
NORTHWEST				
Cumberland	1354	963	1341	2277
Bayfield	1006	746	972	1819
NORTH CENTRAL				
Wausau	1354	979	1331	2246
Medford	1334	944	1319	2227
NORTHEAST				
Crivitz	1264	898	1243	2162
Crandon	1246	865	1207	2094

Alerts

Western bean cutworm - Moth sightings are on the increase. The season's first official catch was documented at the Sparta black light trapping site last week; this week more moths were found at the Janesville, Lancaster, Mazomanie, Marshfield and Madison black light trapping sites. Current captures of western bean cutworm moths signal egg laying is occurring in fields now, and according to the western bean cutworm degree day model, 75% emergence has occurred where 1536 GDD50 have accumulated. Scouting for western bean cutworm in corn should begin in the week ahead, or as soon as the first moths of the season are detected. Check 10 consecutive corn plants in five random locations per field. Look for egg masses or small larvae on the upper surfaces of corn leaves. Also, check tassels for larvae before pollen shed. Consider applying an insecticide if 8% of the plants in a field have an egg mass or young larvae in the ear, but only if the larvae are exposed and susceptible to insecticides. Control is more difficult after the larvae have moved to the silks. -- *Krista Lambrecht*

Looking Ahead

European corn borer - Counts have risen considerably from last week at several black light trapping sites, suggesting the second flight is in full swing in the south. This week's highest capture of 137 moths was reported from Plover in Portage Co.; the second highest catch of 58 moths came from the West Madison research station. The most effective treatment window for second generation corn borer larvae has opened near Beloit, Lone Rock, LaCrosse, Madison, and Waukesha where 1550 GDD50 have been reached. This window will remain open until 2100 GDD50 have accumulated, but there's no time like the present to initiate scouting efforts for egg masses and small larvae. If the heat persists, advanced southern sites could document peak second flight early next week. Treatment for second generation borers in field corn may be applied at first hatch when 50% of plants are infested with egg masses or small larvae.

Soybean aphid - The soybean aphid situation continue to intensify throughout much of the southeastern part of the state where populations exceeding 250 aphids per plant have grown more common and infestations affecting 90-100% of the plants are now the norm. Soybean aphid densities are expected to peak in the next two or three weeks. Scout now to determine if your soybean fields may benefit from an insecticide treatment. As a reminder, only treat fields when densities exceed 250 aphids per plant, populations are actively increasing, and soybeans are younger than R5. Where densities are approaching the action threshold and temperatures have been extremely high (>90F), it may be necessary to scout fields a few days in a row to determine if populations are indeed building.

Corn rootworm - Adults continue to emergence in high numbers and silk damage is increasing in drought-stressed fields where fresh silks are available. Peak adult emergence remains about two weeks away. Growers intending to plant continuous corn should plan to begin closely monitoring beetle populations in early August and continue efforts at 7-10 day intervals through mid-September. The number of adults present in fields in late summer is indicative of the density of next year's population. Visit the **CORN** section for scouting recommendations.

Corn earworm - Low numbers of moths appeared in black light traps near Lancaster (2), Mazomanie (2), and Marshfield (3) this week, as well as in Hartstack pheromone traps located near Coon Valley (14) and Sturtevant (3). Treatment of sweet corn is recommended if three adults per black light trap are caught on 2-3 consecutive nights, if five moths per night are caught in a Hartstack trap, or two moths per night are captured in a Scentry trap.

Potato leafhopper - Excessive populations have developed in east central alfalfa fields and hopperburn injury is worsening in drought-stressed fields throughout the state. Continue sweeping fields in the week ahead. Pay particularly close attention to leafhopper levels in third crop regrowth, as carryover from the second crop is a strong possibility.

Corn

Western bean cutworm - By now most Wisconsin Pest Bulletin readers have some level of familiarity with this new, potentially very destructive corn pest. While it has not been uncommon for a few moths to turn up in northwestern Wisconsin black light traps in recent years, the unprecedented eastward expansion of western bean cutworm and a marked increase in moth sightings has heightened our interest in this pest.

The western bean cutworm, as its name suggests, comes to us from the western cornbelt states such as Nebraska, Kansas and Colorado. In its home range, the larvae are considered an occasional, sometimes severe pest of corn and dry beans. For reasons that are not entirely clear, western bean cutworm's range has expanded into Wisconsin and other Midwestern states in the last five or six years. Milder winters and more favorable sandy soils types for overwintering may have something to do with its spread. Because this species is not migratory in nature, we know that the moths appearing Wisconsin trap originate from a local source. Whatever the

reason for the expansion, repeated sightings indicate the western bean cutworm is here. Cooperators monitoring black lights, especially those in the central and eastern regions of the state where official occurrence has not been recorded, should watch for western bean cutworm moths to appear in the week ahead.

Two very distinct features make western bean cutworm easy to differentiate from similar species. First, the upper wing margins are whitish. Second, the combination of a single small circle positioned above a crescent-shaped marking on each wing is diagnostic (see image below). Adults are about ¾ inch long with a wingspan of 1 ½ inches.

Precisely how large an impact western bean cutworm may have on Wisconsin cornfields is unknown. This season, DATCP survey specialists hope to gain a better understanding of the distribution of western bean cutworm in the state, and the most effective time to scout for larvae in corn. As a general rule, scouting should begin once the first moth has been observed. In addition, a network of plastic milk carton traps baited with pheromone lures were placed this week at the following sites: Winnebago Co.-Oshkosh; Outagamie Co.-Freedom; Shawano Co.-N Polaski; Brown Co.-Henrysville; Kewaunee Co.-Kewaunee; Manitowoc Co.-Two Creeks and Cleveland; Sheboygan Co.-Sheboygan; Fond du Lac Co.? St. Cloud; Calumet Co.-Brillion; Green Co.-Juda; Iowa Co.-Arena; Dane Co.-Mazomanie and McFarland. Look for in current western bean cutworm trap counts in next week's Wisconsin Pest Bulletin.

Western bean cutworm growing degree day model

- 25% emergence at 1319 GDD50
- 50% emergence at 1422 GDD50
- 75% emergence at 1536 GDD50

Corn rootworm - Pupation and emergence of this insect continues. Scouting efforts in the week ahead should concentrate on assessing levels of silk pruning. Now is also a critical time of year to begin planning an August through mid-September scouting regimen to assess this season's adult corn rootworm population. This summer's beetle population will lay the both the eggs and the foundation for next summer's rootworm problem. The benefit of monitoring beetle numbers in August and September is that this population estimate serves as a reliable indicator of the potential for damage to root systems by corn rootworm larvae next season.

Scouting for adults should begin before 70% of the plants are in the process of silking. Corn rootworm beetles do not reduce yields once pollination is over and silks have turned brown. To determine the damage potential for next season,

scout acreage a minimum of three times at 7-10 day intervals from early August through mid-September. Count the number of beetles on 10 random plants in five separate areas (50 plants total) during each sampling. Count the beetles on the entire plant, concentrating efforts in the silks. Record the number of beetles per plants and the number of plants with silks clipped to ¼ inch or less. Also record the number of plants that haven't silked, the number with fresh silks, and the number with brown silks, out of the 10 plants examined. Applying a soil insecticide or rotating to a crop other than corn is recommended when 0.75 beetles per plant are counted during any of the three field samplings.

European corn borer - Several noteworthy corn borer events are in progress across the state. Where 1400 GDD50, have accumulated, as far north as Appleton, moths of the second flight are active. In several southern counties where 1500 GDD50 have been reached, second generation eggs are hatching and first instar larvae are expected to be visible in the week ahead. Treatment for second generation borers in field corn should be applied at hatch when 50% of the plants are infested with eggs or small larvae.

Hot temperatures apparently favored the development of this insect in the last week because black light trap catches of moths increased greatly at several black light trapping sites. This week's black light trap catches are as follows: Janesville 14; Lancaster 0; West Arlington 9; Stoughton 1; Sparta 7; Chippewa Falls 15; Manitowoc 3; Wausau 7; Marshfield 22; West Madison 58; Mazomanie 49; Plover 137; Plainfield 6. The summer flight of moths is expected to peak at advanced sites early next week, once 1733 GDD50 have passed.

Corn Leaf Aphid - Dense populations have developed in some Winnebago, Outagamie and Shawano Co. corn fields where 45-70% of tasseling corn plants were infested with >50 aphids per plant. Because the effects of corn leaf aphid infestations may be heightened during periods of dry weather, growers should pay close attention to corn leaf aphid in the next two weeks. Dry weather not only favors aphid population growth, but also prevents the development of the fungal pathogens that ordinarily keep corn leaf aphid populations in check.

Corn plants are most susceptible to corn leaf aphid injury during the late whorl to pollen shed stage. UW-Extension

recommends growers examine 10 sets of five consecutive plants (total of 50 plants) during the late whorl to early tassel emergence stages. Be sure to unroll the whorl leaves and look for aphids inside. A single insecticide application is warranted when 50% of the plants have 50 or more aphids. Treat before tassels have emerged but not before the upper whorl leaves open to exposed tassels.

Forages

Potato Leafhopper - Sweep net sampling in east central fields showed populations continued to increase this week with a limited number of fields containing in excess of 14 leafhoppers per sweep. Severe hopperburn combined with extreme drought stress has caused many fields to yellow almost completely. While populations are relatively high in second growth alfalfa, there appears to be considerable variation in counts between fields. This week's counts ranged from 1.7-14.5 leafhoppers per sweep. The discouraging news is that hot, dry conditions are expected to continue to promote the development of this insect, and at levels as high as were documented this week carryover into third crop hay is a strong possibility. Heavy populations of potato leafhoppers, in addition to high levels of aphids, plant bugs, grasshoppers and inadequate moisture, mean the outlook for third crop hay is bleak.

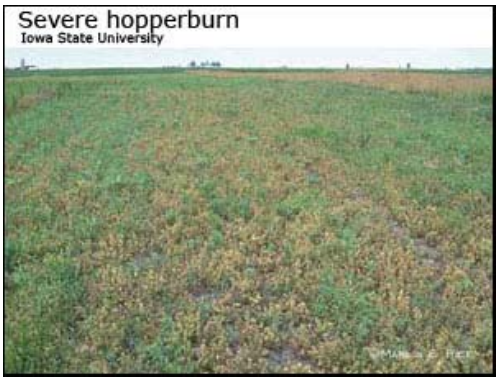


Table 1. Potato leafhopper sweep net counts--July 20-21, 2005

County Surveyed	Alfalfa height (inches)	Ave no. plh per sweep	Above threshold?
Winnebago	10	3.1	yes
Winnebago	14	10.0	yes
Winnebago	16	14.2	yes
Outagamie	24	4.4	yes
Outagamie	16	1.7	no
Outagamie	22	3.3	yes
Shawano	16	2.9	yes
Shawano	22	14.5	yes
Shawano	20	6.3	yes
Waupaca	14	2.5	yes
Waupaca	12	4.0	yes

Soybeans

Soybean Aphid -Despite the intense heat, no break in the trend toward worsening aphid infestations was noted in the fields sampled this week. More and more fields with 100% infestation continue to be detected as the 2005 soybean aphid survey progresses northward. Survey specialists have now sampled fields as far north as Manitowoc Co. in the east and Buffalo Co. on the western side of the state. Seventeen of the 27 fields (63%) of the fields sampled this week were estimated to be 100% infested (at least one aphid on every plant in the field), while the remaining fields were at least 85% infested, with the exception of one lightly infested Kenosha Co. field (20%). Aphid densities within individual fields remained highly variable, but more above-threshold (average exceeding 250 aphids per plant) fields were encountered.

In addition, pest survey intern Corey Godina sampled fields in Washington Co. last week and talked with several growers who indicated threshold levels were surpassed by July 14

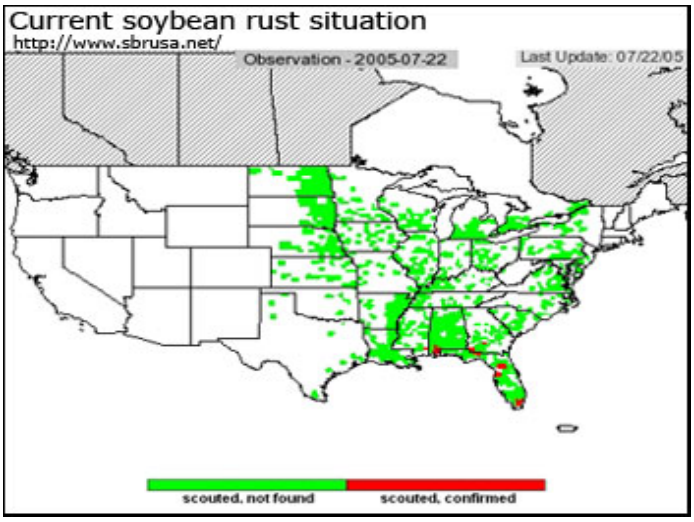
Table 1. Densities of soybean aphids in 9 Wisconsin counties surveyed from July 18-20, 2005.

County	Average no. of aphids per plant	Ave no. of aphids per infested plant	% of 20 plants infested with aphids
Buffalo 1	77	77	100
Buffalo 2	34	34	100
Buffalo 3	196	196	100
Jackson 1	43	43	100
Jackson 2	28	30	95
Kenosha 1	4	5	85
Kenosha 2	7	35	90
Kenosha 3	6	7	90
Kenosha 4	0	2	20
LaCrosse 1	17	17	100
LaCrosse 2	52	52	100
LaCrosse 3	28	18	100
LaCrosse 4	38	38	100
Monroe 1	44	46	95
Monroe 2	154	154	100
Monroe 3	207	229	90
Racine 4	4	4	95
Richland	311	311	100
Richland	119	119	100
Richland	623	623	100
Trempealeau	372	372	95
Trempealeau	618	618	100
Trempealeau	98	98	100
Trempealeau	411	411	100
Vernon	39	39	100
Vernon	112	112	100
Vernon	24	42	95

and many acres had to be sprayed. The most severely infested fields found during this week's surveys were in Richland and Trempealeau Cos. Fields sampled in Buffalo, Jackson, Monroe, La Crosse, Monroe, Racine and Kenosha Cos. had levels of aphids still below the action threshold. Growers are strongly urged to be on the alert in the next two weeks as many of the fields currently just below threshold levels (<250 aphids per plant) fields could worsen into the above-threshold range. All fields sampled this week were in the R2-R3 stages of growth. See the table below for this week's soybean aphid survey findings.

Soybean rust -The first rust find in Mississipi in 2005 occurred from soybean samples collected on July 13th from a sentinel plot in George County. Another county in Georgia, Tift County, reported rust on soybean, while the Seminole County find was on volunteer soybeans which have since been destroyed. Eight counties in Florida have now reported soybean rust on kudzu with two reports from soybean. The newest report is from soybean grown in a sentinel plot in Escambia County near to some production fields. In

Alabama,soybean rust has now been reported on soybeans from a sentinel plot and a commercial soybean field. This

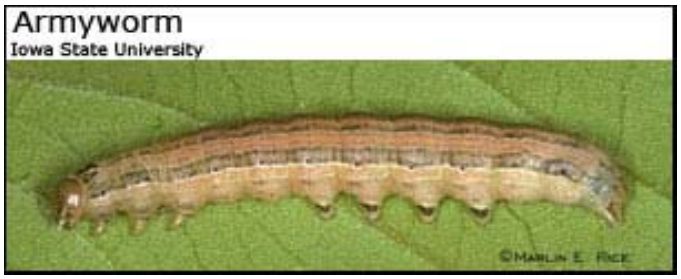


was the first report from a commercial soybean field in 2005. Intensive scouting is continuing throughout eastern North America from the Gulf coast to southern Ontario wherever soybean is grown with no new finds. As new tropical storms move through infected areas,there is more possibilities of spore dispersal. The fallout from "Dennis" in terms of new infection points would be 7 or more days after spore deposition. *info from* http://www.sbrusa.net/

Vegetables

Armyworm - The number of adults caught in black light traps finally tapered off this week at locations that were experiencing large catches. The drop in moth numbers indicates that second generation of armyworm larvae are or will soon be feeding in sweet corn, pea or potato. Unfortunately, the second generation is the most damaging. The good news is there are many predators and parasites to help keep armyworms in check.

In potato and pea, young larvae feed on terminal growth and older larvae feed closer to the ground. In corn, ragged leaf edges indicate feeding damage. Larvae grow to be two inches long, are brownish green and hairless with alternating stripes down their back. The light brown head has darker markings resembling netting.



In pea and potato, when feeding damage is observed, shake five foot sections of two adjacent rows and count larvae on soil surface, and repeat at several location. Spot treat if possible when two larvae/foot of row are observed. In sweet corn, check five sets of 20 plants. Record the number of damaged plants and the number of worms per plant. Spot treat if possible when there are two or more armyworms at 3/4 inch or longer per plant on 25% of the plants OR there is one armyworm per plant on 75% of the plants. (Scouting Procedure from the UW-Extension Veg Crop Scouting Manual)

Black cutworm - Black light trapping indicates fewer moths are flying, which means larvae are most likely beginning to feed. However, damage to sweet corn at the point in the season is rare since moths prefer to lay eggs on vegetation low to the ground, not on planted corn.

Cabbage looper - This week, only two moths were caught in the Grant Co. trap, down from 15 last week (7/7-7/14), and 95 the week before (6/30-7/7). Flight still continues in Waushara Co. were 91 moths were caught this week (7/13-7/20), and 56 were caught last week (7/6-7-13). In Columbia Co., 42 moths were caught this week(7/15-7/22). Young larvae were observed feeding on nearly every plant in a cole crop planting at the West Madison Ag Station. This find is not surprising given the high numbers of moths that have been observed in other areas of the state. However, a pheromone trap 15 miles away only caught three moths this week, again showing that cabbage looper infestations are often very localized. No larvae were found on cole crop plantings in Racine and Ozuakee Cos., although seven moths were caught in the trap at the Ozuakee Co. site. Growers should continue to scout and treat as necessary.

Imported cabbageworm - The only butterflies observed this week were in an Ozaukee Co. cole crop planting, but no eggs were present yet. Eggs were present in a Dane Co. planting.

Corn earworm - Moths continue to drift into the state. This week's pheromone trap counts: Coon Valley 14; Sturtevant 3; Madison 0; Mazomanie 0. Moths also showed up at low numbers in black light traps. Treatment is recommended if three adults/black light trap are caught on two to three consecutive nights or if five moths per night are caught in a Hartstack trap, or two moths per night in a Scentry trap. Trapping for moths is the best scouting tool to time effective insecticide treatments. Moths lay eggs on the silks, and if no insecticide is present right when eggs hatch, the larvae will crawl into the ear, completely protected from insecticide treatment. Silking sweet corn should be treated every few days until silks turn brown.

Corn Leaf Aphid -Accodring to Karen Delahaut, aphid numbers were so abundant on the tassels in a Rock Co. sweet corn field that numerous aphids had migrated down to the ears in search of less populated real estate. The dense colonies had left a sticky black mess on the ears, and Karen noted that the grower was rightly displeased, as most customers prefer their sweet corn that isn't sticky and loaded with aphids.

Squash Vine Borer - SVB eggs have been laid in southern Wisconsin and some growers have reported vine wilting on pumpkins and squash plants. Lures can be purchased from Great Lakes IPM in Michigan. Make sure you get the Hercon brand lures (not Trece or Scentry) and purchase a large delta trap like the Trece Perocon VI. For more information on squash vine borer management options visit [http://cecommerce.uwex.edu/pdfs/A3756_e.PDF.](http://cecommerce.uwex.edu/pdfs/A3756_e.PDF) *-- July 15, Wisconsin Hort Update, Karen Delahaut, UW-Extension Fresh Market Vegetable Coordinator*

Squash Bug -The squash bug has become a serious problem in Wisconsin in recent years and the seriousness of this pest continues to increase each year. This insect is capable of feeding on all vine crops but are particularly fond of pumpkin and squash. Squash bugs feed on the sap of the plant and inadvertently inject a toxin in their saliva that causes the plant to suddenly wilt, this is called 'anasa wilt'. In addition, adult or nymph feeding on developing fruit will damage and render it unmarketable. At this time, conventional growers can optimize their time and expense by mixing up a tank of Asana XL (esfenvalerate) and treating pumpkins and squash every 5-7 for a total of 2-3 applications during the 3 week egg-laying period of the SVB. If squash bugs continue to be a problem after that, continue the spray program but don't exceed 0.25 lb ai/A/season. For more information on squash bugs visit http://cecommerce.uwex.edu/pdfs/A3755_e.PDF.-- *July 15, Wisconsin Hort Update, Karen Delahaut, UW-Extension Fresh Market Vegetable Coordinator*

Black Rot - This bacterial disease of cole crops first appears as v-shaped lesions on the leaf margins. These v-shaped areas soon die and become tan and dry as the disease progresses. The leaf veins become blackened and are readily apparent when the leaf is held up to a bright light. If the stem is cut, a discoloration of the vascular system becomes visible as the bacteria moves down from the leaves throughout the plant.

Prevention of this disease can be accomplished through the planting of certified, disease-free seed grown in the Western US. Growing seedlings in soil free from the black rot pathogen and careful inspection of transplants before putting them into the field will also reduce the chance of infection. As an added precaution, do not dip transplants in water prior to transplanting. Because the causal organism is a bacterium, any activity in wet fields is discouraged as the bacteria can be spread from infected plants to healthy plants. For more information on black rot visit http://cecommerce.uwex.edu/pdfs/A3755_e.PDF. -- *Karen Delahaut, UW Fresh Market Vegetable Coordinator*

Choenophora Wet Rot - This disease causes the blossom end of summer squash to shrivel up. *Choenophora cucurbitarium* is the causal agent of Choenophora wet rot and is transmitted into the blossom by insects, rain, and wind. Rain, humid weather, and overhead watering are all factors that contribute to infection. This organism is also capable of causing similar symptoms on cucumbers and pumpkins.

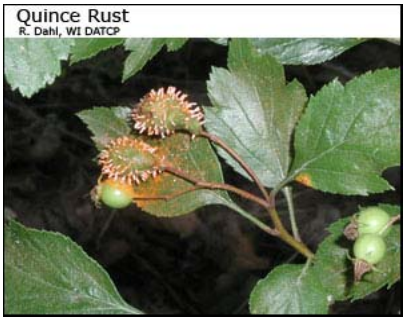
When young fruit are infected, the symptoms appear as a wet fruit rot. Later on, a white fuzzy growth will cover the fruit and blossom, eventually invading the entire fruit inside and out. There are almost as many fruit rots of cucurbits as there are problems on tomato fruit so it's important to know what type of cucurbit you have to narrow down the list. -- *Karen Delahaut, UW Fresh Market Vegetable Coordinator*

Forest and Landscape

Emerald ash borer (EAB) - The Ohio Department of Agriculture announced the find of emerald ash borer at a housing development just south of Delaware in Delaware Co. Delaware County is located in the center of the state and is quite a distance from the main infestation in the northwest part of the state. Thus far, all but one of the EAB infestations in Ohio have remained confined to the extreme northwest corner of the state. In November, 2003, an EAB infestation was found in the Easton area of Columbus, Ohio. That infestation was apparently eradicated successfully as was an infestation in Hicksville, Ohio, that had also been discovered in 2003. The Ohio Department of Agriculture along with the USDA plans an aggressive eradication program for this newest find. It is likely the infestation started as a result of the transportation of firewood, ash tree nursery stock, ash logs, or other ash tree materials from a quarantined area. In Delaware County, all ash trees, visibly infested or not, within one-half mile of the infested tree will be marked for removal. Destroying ash trees within the insect's natural spread is the only known way of eradicating EAB in an infested area. For more information on emerald ash borer or for a map of the latest infestation, go to www.ohioagriculture.gov/eab.

Cedar-apple rust - A heavy infection of cedar apple rust was found on crabapples at a nursery in Kenosha Co. This foliar disease is mostly aesthetic in nature and chemical control is only warranted when infections occur every year due to proximity to its alternate host, juniper. Removing junipers within 500 feet of susceptible crabapples will help limit infections.

Cedar-quince rust - Thornless cockspur hawthorn at a nursery in Grant Co. had a moderate infection of this rust disease of twigs and fruit. Fruit and succulent twigs are susceptible to infection in the spring when spores are carried in the wind from infected junipers. Hawthorns may be susceptible to infection into June if conditions are favorable for spore release from junipers. The infected swelling twigs eventually girdle the twig causing it to die and disfiguring the tree. Occasionally, living rust galls persist on twigs for more than one year. Researchers cite the elimination of junipers within 1 to 3 km as a means of reducing this disease but most often this is not practical. Fungicide applications may be needed where this disease is a perennial problem. Applications should be made when the gelatinous telial horns form on juniper. This usually occurs at the time of hawthorn bloom. Two or more fungicide applications may be needed for adequate control.



Aster yellows - Annual asters at a nursery in Dane Co. were showing symptoms of this phytoplasma disease. The causal agent is transmitted by the aster leafhopper and is capable of infecting a wide range or agricultural and ornamental crops.

Hosta virus X - The latest variety to test positive for this disease is 'Scooter' from a nursery in St. Croix Co. This was a symptomless plant that was picked at random to see whether it would test positive for the virus.

Tobacco rattle virus (TRV) - We are adding a new species to the list of ornamentals that have been found positive for this virus. This week it is 'Palace Purple' coral bells from a

nursery in St. Croix Co. Adding to the varieties of Brunnera, our lab found 'Jack Frost' and 'Looking Glass' positive for TRV.

Venturia shoot blight - Widespread but light amounts of this shoot blight were observed on aspen at a nursery in Marathon Co.

Spiny witch-hazel aphid - This has been an 'up' year for this insect as inspectors are seeing it throughout the southern half of the state. This week aphids were found in moderate amounts on river birch and white spire birch at nurseries in Dane and Grant Cos.

Leafhoppers - Inspectors were seeing moderate amounts of damage to red and sugar maples, mulberry, elm and Newport plum at nurseries in Dane, Grant, Kenosha, Marathon, Ozaukee and Wood Cos. Leafhoppers generally become a problem after alfalfa is mowed or when weeds are mowed in the nursery. Potato leafhopper is the biggest culprit causing leafhopper damage to nursery stock.

Pear slug - This sawfly larva (not a mollusk at all, despite the common name) was seen on Canada red cherry at a nursery in Ozaukee Co. in light to moderate amounts.

Gypsy Moth

Gypsy moth program - As of July 15, trappers have completed setting traps for this season. Trappers have set 34,596 traps or 91% of the expected total number of traps. Trap check has started south of State Highway 10 and trappers have caught 1,265 male gypsy moths as of July 20. Counties with the highest count are: Adams - 602, Kenosha - 39, Racine - 42, Waupaca - 76, Waushara - 43, and Winnebago - 385. Trap check will continue for another 3-4 weeks.

There have been reports of moth flight in Florence, Marinette, and Oconto Counties. Trap check will start north of State Highway 10 on July 25. Readers with questions about the Gypsy Moth Program, please call our hotline at 1-800-642-MOTH or visit our website at: www.datcp.state.wi.us/arm/environment/insects/gypsy-moth/index.jsp

7/20/2005	# of Traps	# of Traps	Positive	Total #
COUNTY	Set	Checked	Traps	of Moths
Adams	157	101	60	602
Ashland	892	0	0	0
Barron	922	0	0	0
Bayfield	2127	0	0	0
Brown	78	10	9	23
Buffalo	652	110	0	0
Burnett	869	0	0	0
Calumet	30	0	0	0
Chippewa	1010	0	0	0
Clark	1497	422	0	0
Columbia	206	0	0	0
Crawford	681	0	0	0
Dane	316	43	4	6
Dodge	99	0	0	0
Door	47	0	0	0
Douglas	1227	0	0	0
Dunn	950	0	0	0
Eau Claire	1226	0	0	0
Florence	62	0	0	0
Fond Du Lac	82	0	0	0
Forest	112	0	0	0
Grant	1229	0	0	0
Green	615	0	0	0
Green Lake	43	0	0	0
Iowa	866	0	0	0
Iron	661	0	0	0
Jackson	1412	342	0	0
Jefferson	64	0	0	0
Juneau	215	0	0	0
Kenosha	31	31	31	39
Kewaunee	35	0	0	0
LaCrosse	530	0	0	0
Lafayette	668	0	0	0
Langlade	95	0	0	0
Lincoln	214	0	0	0
Manitowoc	68	0	0	0
Marathon	395	0	0	0
Marinette	164	0	0	0
Marquette	60	0	0	0
Menominee	40	0	0	0
Milwaukee	49	0	0	0
Monroe	1140	217	2	8
Oconto	112	0	0	0
Oneida	301	0	0	0
Outagamie	72	0	0	0
Ozaukee	28	28	10	10
Pepin	243	0	0	0
Pierce	585	0	0	0
Polk	935	0	0	0
Portage	98	0	0	0
Price	1227	0	0	0
Racine	39	32	32	42
Richland	568	0	0	0
Rock	234	54	4	4
Rusk	880	0	0	0
St.Croix	729	0	0	0
Sauk	848	42	5	6
Sawyer	1142	0	0	0
Shawano	100	0	0	0
Sheboygan	61	0	0	0
Taylor	1150	0	0	0
Trempealeau	713	124	0	0
Vernon	992	0	0	0
Vilas	254	0	0	0
Walworth	64	0	0	0
Washburn	860	0	0	0
Washington	48	0	0	0
Waukesha	64	0	0	0
Waupaca	84	18	14	76
Waushara	72	8	5	43
Winnebago	51	51	28	385
Wood	206	30	8	21
TOTALS	34596	1663	212	1265

Black Light Trapping Results

Trap Site	Date	ECB	TA	FA	BCW	DCW	SCW	VCW	WBCW	CabL	CelL	CEW
Southwest												
Lancaster	7/15-7/21	0	8	0	2	0	0	3	2	0	2	2
South Central												
Arlington	7/16-7/19	0	5	0	2	0	0	0	0	0	3	0
	7/11-7/15	0	7	0	6	1	1	0	0	1	6	0
West Arlington	7/16-7/21	50	9	1	46	4		5	6		2	0
Mazomanie	7/14-7/22	49	5	0	14	11	4	0	2	0	0	2
West Madison	7/14-7/21	58	18	0	28	0	0	0	1	0	4	0
Stoughton	7/14-7/21	3	1									
Southeast												
Janesville	7/15-7/21	14	19		14		1	1			9	0
East Troy												
Eagle												
West Central												
Sparta	7/14-7/21	7	1				2				1	
Chippewa Falls	7/14-7/21	15	2		1							
East Central												
Manitowoc	7/15-7/22	0	9	3	6	33	0	0	0		11	
Central												
Hancock	7/18-7/21				1			1				
Wausau	7/16-7/22	1	0	0	0	4	2	0	0	1	0	0
Marshfield	7/14-7/20	22	1	3	3	3	0	4	1	0	0	3
	7/6-7/14	30	0	2	2	0	6	5	0	0	3	2
Plover	7/14-7/21	137										
Plainfield	7/14-7/21	6										
Northwest												
Cameron												

ECB- European corn borer, TA- true armyworm, FA- fall armyworm, BCW- black cutworm, DCW- dingy cutworm, SCW- spotted cutworm, VCW- variegated cutworm, WBCW- Western bean cutworm, CabL- cabbage looper, CEW- corn earworm

*Trap malfunction or trap flooded.

●Blank cells indicate species presence was not determined.

Apple Insect Trapping Results

	Date	STLM	RBLR	CM	OBLR	AM red	AM yellow	PC
Crawford Co.								
Gays Mills 1	7/10-7/17	30	6	1.5				
	7/3-7/10	104	8	1				
Gays Mills-W2	7/11-7/17	20	0	0	7	0	0	
Iowa Co.								
Dodgeville	7/14-/21	45	9	5	0	0	1	
Dane Co.								
Deerfield	7/13-7/20	41	7	4	0	1 (unbaited)	0	
West Madison	7/15-7/22							
Green Co.								
Brodhead	7/14-7/21	12	1	0	2	0	1	
Dodge Co.								
Brownsville	7/16-7/21	10	7	0	0	0	0	
Racine Co.								
Raymond	7/14-7/21	178	45	0	7	0	0	
Rochester	7/14-7/21	88	26	11.25	0	0	0.15*	0
Ozaukee Co.								
Mequon	7/12-7/18	340	3.5	0.8	0	0.1 (baited)	0	0
Waukesha Co.								
New Berlin	7/14-7/21	93	8	12	4	0	0	
Pierce Co.								
Beldenville	7/7-7/17	110	24	2	0	1	0	
Spring Valley	7/15-7/22	64	33	0	0	0	0	0
Jackson Co.								
Hixton	7/11-7/18	0	0	0	0	0	0	
Marquette Co.								
Montello	7/10-7/17	148	0	3	0	0	0	0
Brown Co.								
Oneida	7/11-7/18	600	12	4	0	0	0	
Sheboygan Co.								
Plymouth	7/15-7/22	230	6	10	61	0	0	
Fond du Lac Co.								
Campbellsport	7/14-7/20	212	12	0	0	0	0	
Malone	7/14-7/21	20	17	2				
Rosendale	6/30-7/20	145	56	7	3	0	0	0
Marinette Co.								
Wausaukee	7/16-7/22	126	8	2	1	0	0	0
	7/8-7/15	104	14	5	3	0	0	0

* Two AM flies were captured per 13 unbaited red ball traps

UW Plant Disease Diagnostics Clinic

CROP	DISEASE/DISORDER	PATHOGEN	COUNTY
FIELD			
Soybean	Brown Spot	*Septoria glycines*	Jefferson, Sauk
	Root Rot	*Phytophthora sojae*	Columbia, Dane
	Root Rot	*Phytophthora sojae, Fusarium oxysporum*	Sheboygan
	Root Rot	*Pythium* sp., *Fusarium* sp.	Dane, Jefferson, Rock
	Root Rot	*Rhizoctonia solani*	Sheboygan
	Root/Crown Rot	*Pythium* sp., *Fusarium* sp.	Jefferson
	Root/Stem Rot	*Phytophthora sojae* , *Pythium* sp., *Fusarium* sp.	Jefferson, Rock
	Soybean Mosaic	Soybean Mosaic Virus	Sauk
	Chemical Burn	Chemical Injury	Brown, Dane
	Manganese Deficiency	Nutritional Disorder	Portage
	Potassium Deficiency	Nutritional Disorder	Dodge
Wheat	Septoria Leaf Spot	*Septoria* sp.	Vernon
FORAGE			
Alfalfa	Root Rot	*Pythium* sp., *Aphanomyces euteiches, Phytophthora megasperma*	Brown
Orchard Grass	Leaf Blotch	*Cercosporidium* sp.	Green
VEGETABLE			
Asparagus	Root/Crown Rot	*Pythium sp., Fusarium sp.*	Sauk
Beets	Root Rot	*Pythium* sp., *Fusarium* sp.	Brown
	Herbicide Damage	Chemical Injury	Brown
Cucumber	Chemical Burn	Chemical Injury	Waushara
Onion	Basal Plate Rot	*Pythium* sp., *Fusarium* sp.	Waushara
	Phyllosticta Leaf Spot	*Phyllosticta* sp.	Jefferson
	Stemphyllium Leaf Blight	*Stemphyllium* sp.	Jefferson
Potato	Black Scurf	*Rhizoctonia solani*	Portage
	Rot	*Erwinia* sp., *Fusarium* sp.	Juneau
	Scab	*Streptomyces scabies*	Portage
Snap Beans	Bacterial Brown Spot	*Pseudomonas syringae* pv. *syringae*	Dodge
Sweet Corn	Water Stress	Physiological	Dodge
Tomato	Bacterial Speck	*Pseudomonas syringae* pv. *Tomato*	Dane
	Walnut Toxicity	Chemical Injury	Grant
FRUIT			
Apple	Fire Blight	*Erwinia amylovora*	Jefferson, Rusk
Cherry	Bacterial Canker	*Pseudomonas syringae* pv. *syringae*	Dane
	Water Stress	Physiological	Dane
EVERGREEN			
Arborvitae	Water Stress	Physiological	Washington
Fir (Including Balsam)	Rhizosphaera Needle Cast	*Rhizosphaera kalkhoffii*	Marinette
	Sirococcus Tip Blight	*Sirococcus* sp.	Price
	Water Stress	Physiological	Ozaukee
Juniper	Pestalotiopsis Tip Blight	*Pestalotiopsis* sp.	Dane
Pine (Including Red)	Water Stress	Physiological	Rock
Spruce (Including Blue)	Phomopsis Tip Blight	*Phomopsis* sp.	La Crosse
	Root Rot	*Phytophthora* sp.	St. Croix
	Sooty Mold	Pathogen	La Crosse
	Herbicide Damage	Chemical Injury	St. Croix
	Water Stress	Physiological	Chippewa, Eau Claire
HERBACEOUS ORNAMENTAL			
Butterfly Weed	Root/Crown Rot	*Pythium* sp., *Rhizoctonia solani*	Dane
Marigold	Herbicide Damage	Chemical Injury	Portage
Peony	Girdling Root	Physiological	Dane
	Root Rot	*Rhizoctonia solani*	Dane
Petunia	Root Rot	*Phytophthora* sp.	Outagamie
Queen-of-the-Prairie	Powdery Mildew	*Oidium* sp.	Outagamie
Snow Mound	Root Rot	*Rhizoctonia solani*	Dane
WOODY ORNAMENTAL			
Ash	Anthracnose	*Gloeosporium* sp.	La Crosse, Portage
	Water Stress	Physiological	Jefferson
Chokecherry (Canada Red)	Drought Stress	Physiological	St. Croix
Elm	Dutch Elm Disease	*Ophiostoma ulmi*	Columbia, Dane
	Sphaeropsis Canker	*Sphaeropsis* sp.	La Crosse
Highbush Cranberry	Root Rot	*Phytophthora* sp., *Pythium* sp.	Walworth
Lilac (Including Japanese)	Water Stress	Physiological	Waukesha
Maple (Including Sugar)	Anthracnose	*Gloeosporium sp.*	Jefferson
	Verticillium Wilt	*Verticillium sp.*	Rock
	Chlorosis	Nutritional Disorder	Jefferson
	Drought Stress	Physiological	Grant, Jefferson
Oak (Including Pin, Red, White)	Anthracnose	*Gloeosporium* sp.	Dane, Jefferson, Michigan, Waukesha
	Oak Wilt	*Ceratocystis fagacearum*	Buffalo, Dane, Rock
	Tubakia Leaf Spot	*Tubakia* sp.	Dane
	Tatters	Physiological	Dane
	Chlorosis	Nutritional Disorder	Waukesha
Redbud	Verticillium Wilt	*Verticillium* sp.	Unknown
Smokebush	Verticillium Wilt	*Verticillium* sp.	Rock, Waukesha
Snowberry	Root Rot	*Pythium* sp.	Walworth
Wintercreeper	Anthracnose	*Collectotrichum* sp.	Milwaukee
	Water Stress	Physiological	Milwaukee

For additional information on plant diseases and their control, visit the PDDC website at: www.plantpath.wisc.edu/pddc.

Diagnoses since 7/13/2005

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Web Site of the Week

IPMnet NEWS'

http://www.ipmnet.org/news.html

Well, not really a web site, but rather a newsletter available on the web, *IPMnet NEWS* comes from the Consortium for International Crop Protection, and provides snapshots of IPM info from around the world.

Quote of the Week

"Heat, ma'am!" I said; "it was so dreadful here, that I found there was nothing left for it but to take off my flesh and sit in my bones."

Sydney Smith (1771-1845)

http://www.soils.wisc.edu/wimnext/tree/arbor.html

July 22, 2005