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

Weather and Pests

For much of the state, the weather story is the rain that keeps on not falling. Most of the state is reporting soil moisture conditions in the "short" or "very short" category, and there's little relief in the forecast. Temperatures are forecast to reach the 90's from Janesville to Rhinelander this weekend, adding to the stress. For much of Wisconsin, the next chance of rain comes on Monday.

Alerts

Twospotted spider mite - A crop scout from Manitowoc Co. reported that this pest has reached "epidemic levels in many soybean fields in southern Manitowoc county -not just a field edge phenomenon." Twospotted spider mites were also reported on snap beans in central Wisconsin.

Every few years, Wisconsin experiences an outbreak of twospotted spider mite. And this year, a combination of dry

Site		2004	Base	Base	
	GDD*	GDD	48	40	
SOUTHWEST					
Dubuque, IA	1467	1377	1412	2417	
Lone Rock	1408	1266	1374	2323	
SOUTH CENTRAL					
Beloit	1453	1337	1398	2384	
Madison	1425	1234	1395	2348	
Sullivan	1432	1238	1348	2352	
Juneau	1412	1203	1366	2324	
SOUTHEAST					
Waukesha	1347	1180	1301	2242	
Hartford	1336	1140	1338	2228	
Racine	1244	1105	1259	2119	
Milwaukee	1228	1066	1228	2102	
EAST CENTRAL					
Appleton	1243	946	1258	2088	
Green Bay	1145	872	1175	1983	
CENTRAL					
Big Flats	1358	1088	1322	2240	
Hancock	1332	1044	1295	2200	
Port Edwards	1292	981	1275	214	
WEST CENTRAL					
LaCrosse	1457	1270	1417	2404	
Eau Claire	1340	1084	1363	223	
NORTHWEST					
Cumberland	1161	831	1176	199	
Bayfield	839	621	1322	156	
NORTH CENTRA	AL				
Wausau	1176	851	1177	197	
Medford	1151	815	1162	195	
NORTHEAST					
Crivitz	1083	771	1076	189	
Crandon	1075	747	1058	183	



Two spotted spider mite

weather and stressed plants has created optimal conditions for such an outbreak. Adult twospotted spider mites are less than .02 inch long, yellow-green, have eight legs, and when feeding, have two spots, one on each side of their body. Mites pierce plant cells with specialized mouthparts and suck out the contents. Damage usually begins at field edges as mites move in from adjacent grasses and weeds. Growers can scout plants for white flecks on the underside of the leaves, called "stippling," which is the first sign of damage. Later, leaves will dry out, appear bronzed, and drop off the plant, giving the appearance of drought damage. Plants can also become covered in webbing spun by mites. Treatment is suggested if several leaves have active colonies and damage prior to the R6.5 to R7 stage.

Looking Ahead

European corn borer - The second flight of corn borer moths is in progress at locations where 1400 GDD50 have accumulated. Plan to begin scouting for second generation egg masses and larvae at 1550 GDD50. A greater percentage of eggs will be found on leaves near the ear zone at that time. Preferred egg laying sites for the summer flight of moths are late-planted or late-maturing varieties of corn, with sweet corn being the most favored host. The most effective treatment window for second generation corn borer is from 1550-2100 GDD50.

Soybean aphid - Scout now! Populations are approaching peak levels throughout the south. Check fields two times within a 5-7 day period to determine the rate of soybean aphid population growth. Bryan Jensen (UW IPM Specialist) and Richard Proost (UW Nutrient & Pest Management Specialist) have developed a visual guide to help estimate the numbers of soybean aphids per leaf. Copies of the 8.5 x 8 inch folded card may be ordered by calling (608) 265-2660 or by emailing npm@hort.wisc.edu. Where population densities exceed 250 aphids per plant, control may be necessary.

Japanese beetle - Be on the lookout for skeletonized leaves when scouting soybean fields in the week ahead. The Japanese beetle's contribution to defoliation levels in fields, in addition to other defoliators like grasshoppers and both bean leaf beetles could push some fields over the threshold of 30%. No more than 30% defoliation should be tolerated in pre-bloom soybeans, 20% defoliation between bloom and pod fill, and 25% after pod fill to plant yellowing. **Corn rootworm -** Continue to watch for increasing numbers of beetles and silk clipping in the week ahead. Peak adult emergence remains approximately three weeks away. The symptoms of larval feeding on corn root systems, including lodging and goosenecking, are visible in fields with heavy populations.

Potato leafhopper - Hopperburn injury was beginning to worsen in alfalfa fields on sandier soils late last week, and conditions continue to be favorable for high populations to develop in fields statewide. As a reminder, hopperburn is the distinct, v-shaped yellowing of the leaf tips resulting from potato leafhopper feeding. It should not be mistaken for boron deficiency, drought stress, summer black stem disease or other conditions that cause yellowing of alfalfa leaflets.

Bean leaf beetle -Although very low levels of defoliation have been observed in soybeans fields in recent weeks, continue to monitor beetle activity and levels of defoliation. There exists a slim possibility for pod feeding or clipping to occur later this month and in August.

Apple maggot - Apple maggot emergence continued at several trapping sites this week. One Crawford Co. cooperator reported a catch of 11 apple maggot flies this week on an unbaited red ball. An insecticide application for apple maggots should target flies before females have the opportunity to deposit eggs, and is warranted when five apple maggot flies are trapped per baited red ball per week. The action threshold for unbaited red ball traps and yellow boards is one fly per trap per week.

Corn

Corn rootworm - Emergence of corn rootworm beetles continues. In the southern part of the state the threat of silk clipping associated with adult feeding may become an issue in the week or two ahead. Where heavy populations of corn rootworm beetles occur, the amount of silk feeding or pruning is sometimes substantial enough to disrupt the pollination process. Scout fields in the week ahead to evaluate levels of silk feeding.

Once plants are pollinated, the aim of scouting efforts is to get an idea of the potential density of next year's population



Corn rootworm lodging

of beetles. Beginning in early August, check fields at least three times at 7-10 day intervals, and continue through mid-September. Examine 50 plants and count the number of beetles per plant. Corn rootworm beetles often hide in the silks and axils, so examine plants closely. Be sure to place your hand over the silks and count the beetles on the other areas of the plant first, to prevent beetles in the silk from escaping while you count. Calculate the number of beetles per plant during each of the three samplings. If the field average exceeds the economic threshold of 0.75 beetle per plant (38 beetles per 50 plants) during any one of the three scouting trips, growers will probably need to treat with a soil insecticide the following year, or rotate out of corn.

European corn borer - Moths of the second flight are active where 1400 GDD have been reached. Expect the first eggs at 1450 GDD50 and egg hatch at 1550 GDD50. Close monitoring of susceptible crops should begin next week, although peak egg laying is not likely to occur in south central Wisconsin for another week or two. A somewhat prolonged second flight of moths may be in the forecast if the warm, humid conditions persist. The most effective treatment window for second generation corn borers is between 1550-2100 GDD50.

Western bean cutworm - One Western bean cutworm was caught in a pheromone trap near Janesville between July 8th and July 11th. As reported in the June 4th edition of the Bulletin, Western bean cutworm is newer pest to Wisconsin, and it brings with it a reputation of causing 30-40% yield loss in corn in Western states. Although no damage has been attributed to this pest in Wisconsin, it has been sighted here. DATCP staff and several cooperators are trapping for this pest this year to determine the extent of its range in Wisconsin.

Common maize rust and eyespot - Despite the dry conditions, common maize rust and eyespot are beginning to appear in corn fields in the southern regions of the state. Survey observations from Crawford Co. to Rock Co. showed both leaf diseases to be widespread, though at trace levels in all fields surveyed. Rust is a concern in sweet corn and hybrid seed production fields, and eyespot appears to have increased in incidence in the last decade. Leaf blights rarely appear in significant levels prior to tasselling; with the lack of free moisture for spore germination and infection, dramatic spread of either disease is unlikely soon.

Forages

Potato leafhopper - Of three alfalfa fields surveyed in Marquette Co., only one showed signs potato leafhopper damage with 1-2 PLH per sweep and 20% of plants with hopperburn.

Soybeans

Soybean rust - Scenario one remains in effect for Wisconsin: soybean rust present in the extreme southern US, but not moving northward. Soybean rust remains confined to Baldwin County in Alabama, Marion County in Florida and Seminole County in Georgia as of June 29. Tropical storm Arlene did not seem to have an effect on rust movement but hurricane Dennis may be another story. The remnants of Dennis system are projected to reach southern Illinois. Thus, information posted on the USDA Soybean Rust Website at http://www.sbrusa.net/ will be critical to decision making in Wisconsin in the coming days. Symptoms and signs generally take 9-14 days to appear after infection. Air temperatures above 90 F will slow this process, thus it could be more than 14 days before symptoms and signs appear in areas receiving rain from the symptoms and signs appear in areas receiving rain from the Dennis system. USDA computer models re-predicting movement of soybean rust inoculum from the Florida panhandle, to southeast Louisiana, Mississippi, Georgia, western South Carolina, western North Carolina, Tennessee, Kentucky, southeastern Missouri, southern Illinois, and Indiana. Keep monitoring the USDA Soybean Rust Website. We have added a new feature to the Wisconsin soybean website which is intended to provide a Wisconsin perspective to the potential for soybean rust. It is located at http://www.plantpath.wisc.edu/soyhealth/. Also consult the toll free voice message from the UW Plant Disease Detection Clinic at 1-866-787-8411. Fungicides for soybean rust are not needed at this time.

Scenario one will be dropped if soybean rust is reported Louisiana, Mississippi, Tennessee, Kentucky, Missouri, southern Illinois, or Indiana. Scenario two will go into effect if soybean rust is found in these states within the next 14 days. Some growers may be considering fungicides for improved plant health in the absence of soybean rust. - *Craig Grau, UW Plant Pathology* from the *Wisconsin Crop Manager, July 14, 2005*

Soybean aphid - Aphid pressure has intensified in the last two weeks, with some fields reaching densities reminiscent of 2003. In the most severely infested fields, plants have become glossy and sticky from aphid honeydew secretions and there is little surface area left to support additional aphids.

All fields included in this week's survey were in the R2-R3 stages of growth. In most fields survey this week, densities still remained below the threshold of 250 aphids per plant. A Green Co. site approached the threshold with 240 aphids per

plant, and a field in Rock Co. exceeded it with 350 aphids per plant. DATCP's survey efforts for soybean aphids will continue over the next three weeks, and by mid-August we expect to have a more complete understanding of the soybean aphid situation throughout the state.



Japanese beetle - The Japanese beetle is just one of many soybean defoliating insects. Adults are most active on warm sunny days, and their feeding cause soybean leaves to look lacy or skeletonized. Crop scouts who suspect soybean defoliation is being caused by Japanese beetles should first try to locate an adult to confirm its presence in the field. To determine if the extent of feeding is economically important, scouts will need to estimate the percent of leaf defoliation. No threshold based on the number of Japanese beetles per unit



Japanese beetle R. Klein-Koth, WI DATCP

area is currently available. As with all sampling, select at least five areas of the field and at each location estimate the amount of defoliation that has occurred, keeping in mind that most scouts tend to overestimate the amount of loss. When you have made five estimations, average your figures to obtain a single estimate for the whole field.

Treatment for Japanese beetle may be warranted when defoliation reaches:

- 30% before bloom
- 20% between bloom and pod fill
- 25% after pod fill to plant yellowing

Potato leafhopper - Potato leafhopper's effect on soybeans is similar to its effect on alfalfa plants. Feeding causes the leaves to curl and pucker, and eventually the leaf edges begin to yellow or scorch. These symptoms are commonly confused with herbicide injury problems, nutrient deficiency and drought stress. Soybean fields at a heightened risk of begin injured by potato leafhopper feeding during hotter, drier-than-normal seasons. Injury typically affects borders rows first, as leafhoppers move into soybean fields after adjacent alfalfa fields are cut.

Twospotted spider mite - Outbreak reported in Manitowoc Co. See Alerts sections for more details.

Vegetables

Cabbage looper -Fifty-six cabbage looper adults were caught in a pheromone trap in Waushara Co. between July 10 and July 14. A Dane Co. vegetable farm reported three moths (one actually caught in the corn earworm trap), and 10 moths were reported at an Ozuakee Co. site, and 14 at the Arlington Research Station. The Lancaster trapping site reported both

15 moths caught there, down a bit from 95 last week, and a trap malfunction. Clearly, cabbage loopers are making their way into Wisconsin. Scout NOW for eggs and young larvae.



Cabbage looper eggs

Potato leafhopper - One blooming snap bean field had 1.2 nymphs per 10 leaves in central Wisconsin, exceeding the threshold of one nymph per 10 leaves. Potato leafhopper injury develops rapidly in hot, dry weather. Other hosts include potatoes, all types of beans, soybeans, alfalfa, eggplant, strawberries, rhubarb, clover, and apples. To scout for adults, take 25 sweeps per sample site, and for nymphs, turn over 25 leaves (from the middle portion of the plant) and count the number of nymphs. Treat according to thresholds below.

Thresholds for potato leafhopper on snap bean and potato:

ΡΟΤΑΤΟ

- < 0.5 adult/ sweep: do not treat unless nymph populations exceed 2.5/25 leaves
- 0.5 to 1.0 adults /sweep: treat if adults persist at this level for 10-14 days or nymphs are present.
- 1.0-1.5 adults/sweep, treat within 5-7 days or immediately if nymphs are present.
- >1.5 adults/ sweep, treat as soon as possible.

SNAP BEAN

 >1 leafhopper adult per sweep or 1 nymph per 10 leaves: control measures are recommended

European corn borer - Scouts have been seeing borer damage as well as pupae in some tasseling sweet corn in central Wisconsin, while other fields surveyed had no damage. Surveys of green peppers in Waushara and Adams Cos. also found no signs of ECB damage.

Corn earworm -We are still awaiting the big migration event for corn earworms, which typically does not happen until August. Pheromone trapping indicates that moths continued to drift in this week. There were three moths in the Sturtevant trap, 1 at Coon Valley, and none at the Madison and Mazomanie sites.

Hop vine borer - Black light catches this week included one moth at West Arlington, three at West Madison, and four at Lancaster. These adults will lay eggs on grass stems which will hatch next May.

Twospotted spider mites - With the heat and drought, twospotted spider mites have become a serious problem on just about every crop that's not irrigated. Vine crops in particular are very susceptible to mite explosions but mites can also be found on beans, celery, tomatoes, and sweet corn.

Symptoms begin as yellow spots on the foliage but this is quickly followed by overall yellowing and finally browning and drying of the tissue. If you look at the lower leaf surface, particularly where the petiole meets the midrib, you will find the beasts and their characteristic webbing. If your eyes are as bad as mine, you can also tap a leaf over light-colored paper and you will dislodge the mites. *-- Karen Delahaut, UW-Extension Fresh Market Vegetable Program Coordinator*

Fusarium basal plate rot - This disease has been found on garlic in both Brown and Jefferson Cos. It can be particularly problematic for garlic growers in wet soils. The fungus can be brought in on infected cloves when planted, it could be in the

soil or it could be moved to new fields by human activity. --Karen Delahaut, UW-Extension Fresh Market Vegetable Program Coordinator

Potato diseases - Another week deeper into the growing season and there is still no late blight being reported in the Midwest. Severity values continue to rise at a slow pace compared with some years where we were approaching 100 severity values by this date. We've surpassed 18 severity values at all sites in central WI, but in north eastern WI, dry weather has kept severity value accumulation well below the 18 severity value threshold. Early blight continues to develop slowly and at this time, I'm not aware of fields where early blight is considered more than a disease of interest. Fungicide spray programs coupled with fertility programs that match application with crop needs seem to be keeping early blight in check. In the week ahead I expect to see the beginning symptoms of bacterial stem rot, especially in fields with heavy vine growth where the foliage remains damp between irrigations. Matching irrigation to crop needs and avoiding overirrigation are helpful in reducing the incidence of this disease. We've identified Botrytis leaf blight (large dark brown leaf lesions) on foliage from one field and I expect that we'll see more in the weeks ahead as fields are watered frequently during periods of heat and lack of rainfall. We've also seen severe common scab on one sample of Norkotah Russet where the grower had difficulty in keeping up with irrigation needs of the crop earlier in the year. Irrigation management is a critical component of scab management and this serves as a reminder of how severe scab can become when irrigation systems are not capable of providing adequate irrigation during stress periods early in the tuberization and bulking cycles, especially on scab susceptible varieties.

For the latest P-Day (Potato Early Blight) and Severity Value (Potato Late Blight) Accumulations for 2005, visit http://www.plantpath.wisc.edu/wivegdis/index.htm. -- Walt Stevenson, UW Department of Plant Pathology

Location	Calculation	P-Day Total	Severity	
	Date		Value Total	
Antigo emerging 6/1	11-Jul	308	11	
Antigo emerging 6/8	11-Jul	251	10	
Antigo emerging 6/15	11-Jul	190	0	
Grand Marsh emerging 5/15	11-Jul	395	24	
Grand Marsh emerging 5/20	11-Jul	367	21	
Grand Marsh emerging 5/25	11-Jul	328	21	
Hancock emerging 5/18	11-Jul	405	21	
Hancock emerging 5/25	11-Jul	352	18	
Hancock emerging 6/1	11-Jul	306	18	
Plover emerging 5/12	11-Jul	435	20	
Plover emerging 5/23	11-Jul	379	24	
Plover emerging 6/1	11-Jul	317	24	

Fruit

Apple maggot - Flies continued to emerge at a few trapping sites. An insecticide application for apple maggots should target flies before females have the opportunity to deposit eggs, and is warranted when five apple maggot flies are trapped per baited red ball per week, or one fly per unbaited red ball per week.

Forest and Landscape

Apple scab - This fungus was observed in heavy amounts on 'Pink Spires' and assorted crabapples with poor resistance.

Fir needle rust - This needle pathogen was observed in light to moderate amounts on new growth of balsam fir at a nursery grower in Ashland County. The white rust spores were present on the undersides of needles and were easily dispersed by wind. The alternate host is usually woodland ferns near the edges of the field. Removing the ferns by mowing or herbicide will lessen the level of rust spores available to blow back into the fir.

Lirula needle cast - Balsam fir at a nursery grower in Ashland Co. had moderate amounts of this pathogen. This fungus can be a problem where air circulation in a field is compromised. One means of control is to increase air circulation around trees by mowing surrounding vegetation or controlling undergrowth with herbicides, thinning out trees as they mature and grow close, and planting trees where good air drainage can occur.

Alternaria leaf spot - This fungus was causing moderate amounts of yellow leaf spotting on gaillardia plants at nursery growers in Bayfield and Pierce Co.

Leaf curling aphid - Purple and green ash trees were showing moderate amounts of leaf curling aphid damage at a nursery grower in St. Croix County.

Septoria leaf spot - This fungus was present in moderate amounts on pagoda and red twig dogwoods at nursery growers in Bayfield and St. Croix Cos.

Dothistroma needle blight - Widespread, heavy amounts of this fungus was observed on Austrian pine at a nursery in Dane Co.

Linden borer - This insect was causing heavy damage to littleleaf linden trees at a nursery grower in St. Croix County. Reddish-brown frass was observed near the base of the linden trunk where the borers were active. Tree stress is a contributing factor to being attacked by linden borer. Preventative, systemic insecticide drenches can help protect vulnerable trees in a nursery setting.

Balsam gall midge - Balsam fir needles were showing moderate amounts of galls made by the balsam gall midge at a nursery grower in Ashland Co. These small galls on the fir needles are currently green. Later in summer they will turn the needle yellow and affected needles will drop off. When heavy amounts of galls exist the tree becomes unsightly and not fit to sell.

Eriophyid mites - Unidentified eriophyid mites were observed on purple coneflower at a residence in Dane Co. This mite has been observed at this site for more than four years. The symptoms of mite infestation are superficially similar to some symptoms of aster yellows disease on coneflower. The mite infestation causes the "cone" to turn green instead of the normal purple (see photo below). This mite was also reported from Ohio in the *Buckeye Yard and Garden Letter*. Eriophyid mite symptoms on coneflower R. Dehi, WI DATCP

Spiny witch-hazel aphid - Moderate amounts of this leafpuckering aphid were found on river birch at a nursery grower in Dane Co.

Gypsy Moth

Slow the Spread Program- The 2005 Slow The Spread gypsy moth treatment program completed pheromone flake applications on Friday, July 8, 2005. In total, 108,040 acres were treated with pheromone flakes between June 25th and July 8th. Pheromone Flakes are baited with synthetic female gypsy moth pheromone, the scent that attracts male moths. When the area is covered with pheromone, this confuses the males so they can not find the females. The moths are at the end of their life cycle and die without mating.

Gypsy moth trapping program - As of July 13, trappers have set 34,517 traps, or 91% of the expected total number of traps. Typically, we set between 90%-95% of our expected total. The final total depends on accessibility to the trap sites. Trappers finished setting traps in all counties on July 14. We appreciate landowners who allowed us to set traps on their property. Trappers will return two more times, once to check the trap and then to take it down.

Gypsy moth larvae are starting to pupate in the northern parts of the state. Adult moths should begin to appear around the week of July 25. Trappers will start checking traps south of Highway 10 on July 18 and north of Highway 10 on July 25. Trap check takes approximately 3 weeks to complete. Trappers will then do more spot checking to help determine the end of the moth flight.



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C.	Whitney,	WI	DATCP

7/13/2005	Total Traps	# of Traps	%	Counties	
COUNTY	Expected	Set	Complete	Complete	
Adams	157	157	100%	×	
Ashland	1110	895	81%	×	
Barron	922	922	100%	×	
Brown	78	78	100%	×	
Buffalo	748	652	87%	×	
Burnett	869	869	100%	×	
Calumet	30	30	100%	×	
Chippewa	1070	1010	94%	×	
Clark	1829	1497	82%	×	
Columbia	206	206	100%	×	
Crawford	771	681	88%	×	
Dane	325	316	97%	×	
Dodge	100	99	99%	×	
Douglas	1397	1238	89%	×	
Dupp	955	950	99%	×	
Eau Claire	1354	1226	91%	×	
Florence	62	62	100%	×	
Fond Du Lac	82	82	100%	×	
Forest	112	112	100%	×	
Grant	1386	1229	89%	×	
Green	625	611	98%	×	
Green Lake	43	43	100%	×	
Iowa	1073	866	81%		
lackson	1710	1412	97%	~	
Jefferson	64	64	100%	×	
Juneau	215	215	100%	×	
Kenosha	31	31	100%	×	
Kewaunee	35	35	100%	×	
LaCrosse	589	530	90%	×	
Lafayette	751	668	89%	×	
Langlade	95	95	100%	×	
Lincoln	225	214	95%	×	
Manitowoc	68	68	100%	×	
Marinette	396	395	100%	×	
Marquette	60	60	100%	×	
Menominee	40	40	100%	×	
Milwaukee	49	49	100%	×	
Monroe	1222	1140	93%	×	
Oconto	112	112	100%	×	
Oneida	309	301	97%	×	
Outagamie	72	72	100%	×	
Ozaukee	28	28	100%	×	
Pepin	243	243	100%	×	
Polk	609	585	96%	×	
Portage	935	935	100%	×	
Price	1504	1227	82%	×	
Racine	39	39	100%	×	
Richland	694	568	82%		
Rock	250	234	94%	×	
Rusk	972	880	91%	×	
St.Croix	736	729	99%	×	
Sauk	914	848	93%		
Sawyer	1379	1142	83%	×	
Shebovaso	100	100	100%	×	
Taylor	1210	1150	100% Q5%	×	
Trempealeau	753	713	95%	×	
Vernon	1174	920	78%		
Vilas	263	254	97%	×	
Walworth	64	64	100%	×	
Washburn	845	845	100%	×	
Washington	48	48	100%	×	
Waukesha	64	64	100%	×	
Waupaca	84	84	100%	×	
Waushara	72	72	100%	×	
Wood	204	204	100%	×	
	37910	34517	910%	68	

Black Light Trapping Results

Trap Site	Date	ECB	ТА	FA	BCW	DCW	SCW	VCW	WBCW	CabL	CelL	CEW
Southwest												
Lancaster	7/7-7/14	1	20	0	6	1	1	0	0	0	4	0
South Central												
Arlington												
West Arlington	7/9-7/15	9	8		53	3		1			2	0
Mazomanie*	7/7-7/14				2	1						
West Madison	7/7-7/14	0	31	0	37	2	0	3	0	1	13	0
Stoughton*	7/8-7/14	1										
Southeast												
Janesville	7/8-7/14	0	52		32		0				12	0
East Troy*	7/8-7/14											
Eagle												
West Central												
Sparta	7/7-7/14				1		2			1		
Chippewa Falls	7/6-7/14	4										
East Central												
Manitowoc	7/8-7/15	3	4		3	14	0	0	0		11	0
Central												
Hancock												
Wausau*	7/8-7/14	7	6	0	0	0	10	0	0	0	0	0
Marshfield												
Plover	7/8-7/13	0										
Plainfield	7/8-7/13	0										
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	СМ	OBLR	AM red ball	AM yellow
Crawford Co.							
Gays Mills-E2	7/7-7/13	520	47	5	4	11(unbaited)	0
Gay Mills-W2	7/3-7/11	140	0	1	12		
Iowa Co.							
Dodgeville	7/8-7/15	17	5	1	0	0	
Richland Co.							
Hillpoint	7/6-7/12	108	1	0.5	0		
Richland Center - E	7/7-7/13	314	37	6	1	1(baited)	
Richland Center -W	7/7/7-13	168	43	0	0	0	0
Richland Co.							
Baraboo	7/7-7/13	80	24	3	3	0	0
Dane Co.							
Deerfield	7/6-7/13	84	10	2	0		
West Madison	7/8-7/14	10	0	3	1	0	
Green Co.							
Brodhead	7//7-7/14	2	14	2	3	0	0
Dodge Co.							
Brownsville	7/8-7/15	7	2	0	0	0	0
Racine Co.							
Raymond	7/7-7/14	587	81	2	7	0	0
Rochester	7/7-7/14	320	89	5.6	0.5	0	
Kenosha Co.							
Burlington	7/9-7/15	300	3	1.4	0	1	
	7/2-7/8	100	7	1.5	2		
	6/25-7/1	250	3	3	4		
Ozaukee Co.							
Mequon	7/6-7/11	350	0	0	0	0	
	6/28-7/5	725	5.5	0.8	0.5	0.5	0
Waukesha Co.							
New Berlin	6/8-6/14	324	5	3	4	0	0
Pierce Co.							
Spring Valley	7/7-7/13	116	27	1	0	0	0
Marquette Co.							
Montello	7/3-7/10	384	0	1	0	0	0
Brown Co.							
Oneida	7/4-7/11	40	0	0	0	0	0
Sheboygan Co.							
Plymouth	7/8-7/14	155	55	3	5	0	
Fond du Lac Co.							
Campbellsport	7/6-7/13	250+	6		13		
Malone	7/6-7/13	45	35	2.5			

UW Plant Disease Diagnostics Clinic

Spot Mildew ot an Mosaic nese Deficiency ia Leaf Spot xicity	Septoria glycines Peronospora manshurica Pythlum sp. Soybean Mosaic Virus Nutritional Disorder Septoria sp.	Portage Dane Portage Rock Portage	
Spot Mildew ot an Mosaic nese Deficiency ia Leaf Spot xicity	Septoria glycines Peronospora manshurica Pythium sp. Soybean Mosaic Virus Nutritional Disorder Septoria sp.	Portage Dane Portage Rock Portage	
Mildew ot an Mosaic nese Deficiency ia Leaf Spot xicity	Peronospora manshurika Pythium sp. Soybean Mosaic Virus Nutritional Disorder Septoria sp.	Dane Portage Rock Portage	
ot an Mosaic nese Deficiency ia Leaf Spot xicity	Pythium sp. Soybean Mosaic Virus Nutritional Disorder Septoria sp.	Portage Rock Portage	
an Mosaic nese Deficiency ia Leaf Spot xitity	Soybean Mosaic Virus Nutritional Disorder <i>Septoria</i> sp.	Rock Portage	
nese Deficiency ia Leaf Spot xitity	Nutritional Disorder Septonia sp.	Portage	
ia Leaf Spot	<i>Septoria</i> sp.		
xicity		Vernon	
xicity			
	Physiological	Eau Claire	
al Burn	Chemical Injury	Waushara	
ticta Leaf Spot	Phyllosticta sp.	Jefferson	
yllium Leaf Blight	Stemphyllium sp.	Jefferson	
	Erminia sp., Fusarium sp.	Juneau	
ot	Fusarium sp.	Langlade	
Toxicity	Chemical	Walworth	
ticta Leaf Spot	Phyllosticta sp.	Richland	
psis Tip Blight	Phomopsis sp.	Waukesha	
naera Needle Cast	Rhizosphaera kalkhoffii	Waukesha	
Mold	Pathogen	Waukesha	
Stress	Physiological	Jefferson	
o Rattle	Tobacco Rattle Virus	Dane	
cnose	Gloeosporium sp.	La Crosse, Portage	
opsis Canker	Sphaeropsis sp.	Waukesha	
ot	Phytophthora sp.	Rock	
Elm Disease	Ophiostoma ulmi	Columbia, Dane, Jefferson	
al Burn	Chemical	Dane	
ora Canker	Cytospora sp.	Dane	
cnose	Gloeosporium sp.	Dane, Jefferson, Michigan, Waukesha	
ik.	Ceratocystis fagacearum	Columbia, Dane, Marathon, Rock, Waukesha	
a Leaf Spot	Tubakia sp.	Dane	
	Physiological	Dane	
sis -	Nutritional Disorder	Dane, Waukesha	
ot	Pythium sp., Phytophthora sp., Rhizoctonia solani	Waukesha	
e Injury	Chemical Injury	Waukesha	
	al Burn ticta Leaf Spot y/lium Leaf Blight ot Toxicity ticta Leaf Spot psis Tip Blight phaera Needle Cast Mold Stress o Rattle cnose opsis Canker ot Elm Disease cal Burn ora Canker cnose it a Leaf Spot s is ot e Injury liseases and their conl	al Burn Chemical Injury ticta Leaf Spot Physilosticta sp. yillium Leaf Blight Stempohysilium sp. Erwinia sp., Fusanium sp. Fusanium sp. ot Fusanium sp. Toxicity Chemical piss Tip Blight Physilosticta sp. piss Tip Blight Phomopsis sp. phaera Needle Cast Rhizosphaera kalkhoffii Mold Pathogen Stress Physiological io Rattle Tobacco Rattle Virus cnose Gloeosporium sp. ot Phytophthora sp. ot Phytophthora sp. cla Burn Chemical ora Canker Cytospora sp. cla Burn Chemical ora Canker Cytospora sp. clik Ceratocystis fagacearum a Leaf Spot Tubakia sp. s Physiological sis Nutritional Disorder ot Physiological sis Nutritional Disorder ot Physiological sis Nutritional Disorder ot Phyt	