Volume 53 No. 12 July 11, 2008

WISCONSIN PEST BULLETIN

Timely crop pest news, forecasts, and growing season conditions for Wisconsin

STATE OF WISCONSIN DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION PLANT INDUSTRY BUREAU
2811 Agriculture Dr. Madison, WI 53718 • http://pestbulletin.wisconsin.gov

WEATHER & PESTS

Unstable weather conditions with alternating dry and wet periods prevailed in the past week. A series of severe thunderstorms brought heavy rains, high winds and hail to various locations in the state. Crops generally are faring well and growth has been excellent, but wind gusts 60-70 mph on the evening of July 10 are reported to have caused widespread damage in southern and western Wisconsin. Apple orchards in the south have sustained varying degrees of hail damage. Additional flooding and erosion was observed in some areas as a result of the latest rains, and flood warnings remain in effect for rivers in Green Lake, Jefferson, Rock, Waushara and Winnebago counties. Corn that escaped the flooding in the southern counties is now 60 inches tall in the most advanced fields. Disease development, weed growth and reproduction by mosquitoes are all favored by recent conditions.

LOOKING AHEAD

EUROPEAN CORN BORER: The treatment period for first generation European corn borer larvae has passed near Beloit, Madison, La Crosse, Sullivan and in other locations where accumulations of 1,100 degree days (base 50°F) were reached this week. Larvae are entering the midrib, but for the most part are still feeding in the whorls. Although treatment remains an option for growers in the central, east central and northern counties for a few more days, thus far counts in all corn fields surveyed fail to justify this expense. Pupation is expected to begin in portions of southern Wisconsin in the next week.

CORN EARWORM: The larval offspring of an unusually early and heavy flight of migrant corn earworm moths in June have begun appearing in field corn in the south central and west central counties. Fields should be checked regularly for this pest, and treatments applied if 50% or more of the whorls are infested with larvae.

SOYBEAN APHID: Economic population densities of 250 aphids per plant may begin to develop in some soybean fields next week. Surveys in previous years have detected the first significant populations of the season during the second or third week of July.

WESTERN BEAN CUTWORM: The first moths of the season were registered on July 2 in a pheromone trap located near Rosendale in Fond du Lac County. Very low captures of 1 moth reported at 7 of 93 trap sites since then reflect the start of the western bean cutworm flight period. Cooperators monitoring traps this season as part of the DATCP-UWEX network should submit datasheets with trap locations to Krista Hamilton at krista.hamilton@

wi.gov or by fax at (608) 224-4656 by July 15, even if no moths have been registered.

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

FORAGES

POTATO LEAFHOPPER: Populations in alfalfa are unusually low in the southern and west central areas, with a few exceptions. The average count this week was 0.4 per sweep, although an increasing number of fields in Columbia, Dane, Rock and Walworth counties contained 1.5-2.0 per sweep. The characteristic yellowing of alfalfa tips generally found in association with high leafhopper populations was not observed in any field surveyed as of June 10. Control of this pest is warranted only if populations (adults and nymphs) exceed 0.2 per sweep in <3 inch alfalfa, 0.5 per sweep in 3-6 inch alfalfa, 1.0 per sweep in 6-12 inch alfalfa, or 2.0 per sweep in 12-14 inch alfalfa.

Alfalfa leaflets with hopperburn Krista Hamilton DATCP

DEGREE DAYS MARCH 1 - JULY 10

LOCATION	50°F	2007	NORM	48°F	40°F
Dubuque, IA	1204	1484	—	1271	2057
Lone Rock	1089	1420	—	1157	1881
Beloit	1217	1448	—	1274	2062
Madison	1075	1371	1284	1153	1867
Sullivan	1149	1315	1297	1213	1964
Juneau	1094	1308	—	1164	1882
Waukesha	1063	1278	—	1135	1851
Hartford	1037	1294	—	1108	1819
Racine	996	1248	—	1074	1779
Milwaukee	977	1250	1110	1054	1753
Appleton	1006	1269	1156	1074	1757
Green Bay	932	1162	1112	1003	1678
Big Flats	994	1299	—	1039	1721
Hancock	1008	1277	1277	1058	1739
Port Edwards	953	1277	1204	1004	1669
La Crosse	1081	1517	1391	1141	1861
Eau Claire	972	1375	1245	1024	1708
Cumberland	838	1253	1182	873	1522
Bayfield	657	939	868	679	1272
Wausau	859	1179	1127	898	1540
Medford	813	1141	1012	852	1485
Crivitz	852	1120	—	908	1566
Crandon	772	1068	931	793	1409

Method: ModifiedB50; Sine48; ModifiedB40 as of March 1, 2008. NORMALS based on 30-year average daily temps, 1971-2001.

PEA APHID: Numbers have remained static during the past week and currently average about 2 per sweep in the southwest counties, 8 per sweep in the south central counties, and 3 per sweep in the west central counties. There is considerable variation within and among different fields. Occasional alfalfa stands have as few as 1 per sweep or as high as 24 per sweep. Of interest was the moderate incidence of parasitism observed in Dane and Columbia counties, as evidenced by aphid mummies on alfalfa foliage.

CORN

CORN EARWORM: Surveys of V5-V9 field corn in Columbia, Dane, La Crosse, Monroe and Vernon counties revealed light to moderate corn earworm infestations, with larvae ranging in size from ½ to ¾ inch long. Leaf feeding caused by the early instar larvae of this species and the European corn borer was noted on

1-40% (average of 9%) of the plants in 17 of 26 fields (65%) sampled. Due to their very similar feeding patterns, it is not known what proportion of the infested whorls contained which larva. The respective species could not be determined for every plant exhibiting feeding injury without causing further damage to the crop, particularly in those fields with a comparatively high number of infested whorls. The presence of one or both of the species was confirmed in each field by dissecting 2-4 infested whorls. A majority of the feeding was attributed to 1st-3rd instar European corn borers.

The larvae evident at this time are the result of higher than normal numbers of migrant moths that began to arrive in the state during the second and third weeks of June. Significant populations of corn earworm larvae seldom occur in Wisconsin this early in the season. Although no specific economic threshold has been established for this pest in vegetative-stage field corn, treatment decisions should be made based on the percentage of fresh whorl feeding and the presence of live larvae. Similar recommendations for the true armyworm call for treatment when 50% of the whorls show injury and contain larvae.

Leaf feeding by 2nd instar corn earworm larva Krista Hamilton DATCP

EUROPEAN CORN BORER: Observations this week found infestations rates from 1-23% (8% ave.) in V5-V9 corn in the south central district. Surveys in the west central district revealed infestation rates from 3-40% (9% ave.), with the heaviest amounts of whorl feeding noted in Vernon County (19% ave.). Counts in shorter corn were frequently zero or nearly so, and no larvae or leaf feeding was detected in 9 of the 26 fields (35%). Chemical treatment is suggested when 50% of the plants show recent feeding injury at 800-1,100 degree days (base 50°F). Since the degree day standard has already passed in some areas, control treatments will become increasingly less effective as the larvae begin boring into plants. Second and 3rd instar larvae were the most prevalent development stages as of July 10.

STALK BORER: Light to moderate amounts of damage to the marginal rows of corn were observed on a maximum of 15% of the plants in Columbia and Dane counties, and 14% of the plants in La Crosse, Monroe and Vernon counties. Spot treatments are no longer advised now that the degree day accumulation has surpassed 1,400-1,700 (base 41°F) in most areas of the state and the larvae (1¼-1½ inches long) are close to maturity. Stalk borer feeding is unlikely to kill corn plants beyond V7.

CORN ROOTWORM: The first apparent damage due to larval root feeding was noted in western Dane County on July 7 after severe thunderstorms. Similar damage in the form of lodged corn was found in scattered south central fields on July 10. No beetles of either the western or northern species were observed this week, and it will likely be another 2 to 3 weeks before any large numbers of corn rootworm adults are apparent in corn fields.

CORN LEAF APHID: Colonies consisting of 5-20 aphids per plant are affecting approximately 4-12% of the corn plants in Columbia, Dane and Sauk counties. Close monitoring is recommended during the late whorl to pollen shed stages to assess populations and determine the rate of build-up. Densities that exceed 50 aphids per plant on 50% of the plants in a field may interfere with pollen shed and should be treated promptly.

SOYBEANS

SOYBEAN APHID: Surveys indicate that levels of this insect remain very low relative to the economic threshold of 250 aphids per plant on 80% of the plants. Many fields still have no detectable soybean aphid population. Examination of 62 soybean fields (V3-R1) during the period of July 7-10 found aphids in 23 (37%) fields distributed in Columbia, Dane, Dodge, Fond du Lac, Jefferson, La Crosse, Monroe, Vernon, Walworth and Waupaca counties. In the 23 infested fields, average densities per 20 plants examined ranged from 0.2-12.6 aphids per plant on 5-80% of the plants, with an average of 7 aphids per infested plant. The highest single plant count noted this week was 107 aphids in Walworth

County. Examination of 32 fields in Columbia, Dane, Dodge, Green, Iowa, Jefferson, La Crosse, Lafayette, Monroe, Rock, Vernon, Walworth and Waupaca counties failed to reveal any aphids, which may be an artifact of sampling only 20 plants per field. Growers and crop advisors who have inspected fields but found no aphids on the newest growth are advised to check more plants per field. No economic populations of soybean aphids were detected in Wisconsin fields surveyed as of July 10.

Soybean aphids - July, 2007 *Krista Hamilton DATCP*

JAPANESE BEETLE: Low numbers of this beetle and the very similar false Japanese beetle were observed to be skeletonizing soybean leaves in the sandy-soiled areas of Columbia and Rock counties. Leaf feeding by a combination of these insects and other soybean defoliators (grasshoppers, bean leaf beetles, etc.) should not exceed 30% prior to bloom (R1) or 20% between bloom and pod fill (R1-R6).

SMALL GRAINS

PLEASE NOTE: *The following is a revised version of the article that appeared in the June 27 issue (Vol. 53 No. 11), with additional numbers and corrected totals for the completed survey.*

DISEASE SURVEY OF WINTER WHEAT: A disease survey of 124 winter wheat fields in the 11 counties comprising 50% of the wheat acreage in the state was conducted between May 5 and June 19. Wheat fields ranged in maturity from Feekes stage 8.0 (flag leaf visible) to Feekes stage 10.5.3 (flowering compete to base of spike). Counties surveyed and the numbers of randomly selected fields examined were: Brown (9); Calumet (8); Columbia (1); Dane (6); Dodge (14); Door (9); Fond du Lac (16); Kewaunee (8); Manitowoc (11); Sheboygan (10); Waushara (1); Winnebago (10). Leaf samples were collected in almost every field for laboratory confirmation of diagnoses.

POWDERY MILDEW: Powdery mildew (caused by *Blumeria graminis* f. sp. *tritici*) was the most widespread disease encountered, occurring in 87 of the 103 fields surveyed. Incidence (the percentage of plants with symptoms) ranged from 1-100%. Severity (the average percentage of infested plants affected) ranged from a trace to 20%. Generally, severity was low.

SEPTORIA LEAF SPOT COMPLEX: Several species of *Septoria* were isolated from leaf spots collected in 27 fields and both incidence and severity were low. Septoria leaf blotch commonly occurs during wet growing seasons; the disease was encountered in 26% of fields tested this year.

ASCOCHYTA LEAF SPOT: Ascochyta leaf spot (caused by the fungus *Ascochyta tritici*) was confirmed in 11 fields by laboratory testing. No control measures are usually required for this minor disease.

HEAD SCAB: Six of the 103 wheat fields showed the bleached-head symptoms of head scab, caused by *Fusarium* spp. In all fields where the disease was detected, the incidence was low.

TAN SPOT: Samples from 3 fields in Dodge County were determined to have tan spot (caused by *Pyrenophora tritici-repentis*). Severity was below 2% in all fields, with infection limited to the lowest leaves.

LOOSE SMUT: The characteristic signs and symptoms of loose smut (*Ustilago tritici*), such as wheat florets replaced by masses of exposed smut spores or heads consisting merely of empty rachis, were observed much less often than in most seasons. Only 2 fields surveyed showed symptoms of loose smut, and the incidence was far below 1%. No common or dwarf bunt was detected in the state. These bunts (caused by several species in the genus *Tilletia*) are not known to occur in Wisconsin.

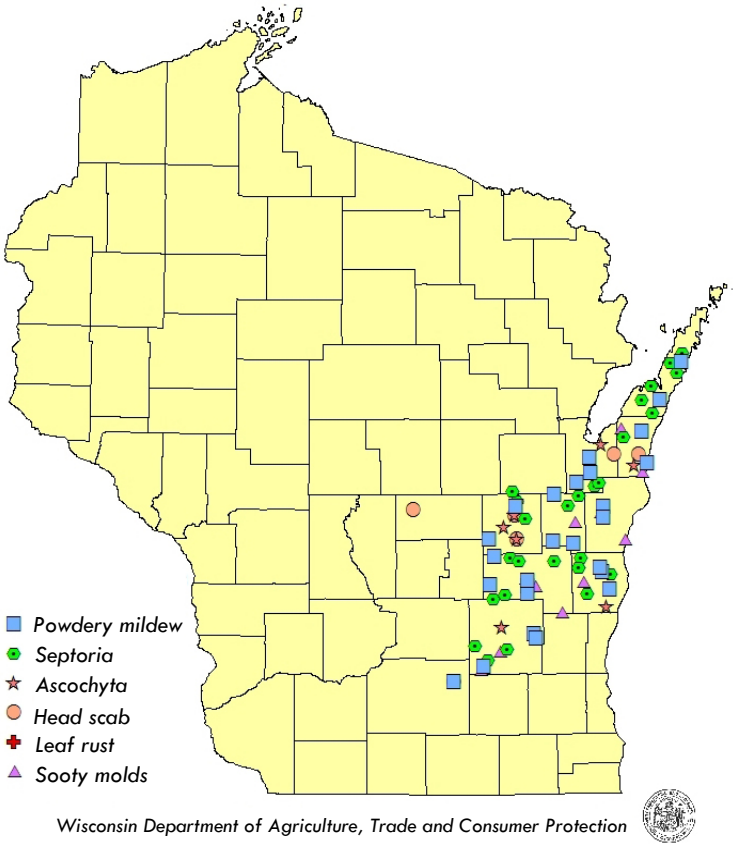
LEAF RUST: Despite reports of leaf rust occurrence in UW research plots, this fungal disease (caused by *Puccinia recondita*) was found at trace levels in only 2 survey

fields, one of which was a seed company variety trial. No stem rust or stripe rust was detected by DATCP personnel.

PSEUDOMONAS LEAF BLIGHT: Plants from 11 fields tested positive for bacterial blight (caused by *Pseudomonas syringae*). The fields were located in Brown (2), Calumet (1), Dane (4), Fond Du Lac (1), Kewaunee (1) and Manitowoc (2) counties.

SOOTY MOLD: Sooty molds caused by a range of mostly-saprophytic fungi were widespread throughout the sampled fields, always confined to the lowest leaves buried in the canopy. Sooty molds are rarely a problem for wheat in Wisconsin, unless harvest is delayed and the infections move to the heads.

2008 DATCP WINTER WHEAT SURVEY



FRUITS

CODLING MOTH: Larvae and fruit injury are apparent in orchards where coverage of neonictinoids was inadequate last month or growers waited longer than the prescribed 14 day-interval between applications. The varieties showing the most injury are those with the densest canopies, such as Paula Red and Cortland. John Aue of Threshold IPM Services advises growers to examine fruits for larval penetration to appraise damage and evaluate the effectiveness of treatments applied in June.

OBLIQUEBANDED LEAFROLLER: Developing fruits should be inspected for larval hatch and feeding injury by the first generation of obliquebanded leafrollers. Larvae require either fruit or foliage, and have begun to feed on available fruits in south central and southwest Wisconsin orchards. Effective control of the first generation at this time will minimize injury and reduce populations of later generations this summer.

SPOTTED TENIFORM LEAFMINER: Pheromone trap counts as high as 2,268 moths during the July 4-10 reporting period represent the peak of the second flight. The optimal sample period for second generation sapfeeder leaf mines begins 10-14 days after peak counts have been registered. The economic threshold for this intermediate generation of leafminers is 1.0 mine per leaf.

PLUM CURCULIO: Assessments of plum curculio controls applied early in June should be performed at this time. John Aue noted that fruit damage in the form of oviposition scars is appearing in orchards, and the larvae are not being killed by the pressure of the developing apple, as normally is the case.

POTATO LEAFHOPPER: Harvesting of second crop alfalfa is credited with the influx of migrants into southern orchards, and leaf curling attributed to this insect has been reported. Spot treatment is not recommended for those orchards experiencing large numbers of leafhoppers, as the adults quickly migrate to the untreated fruit tree varieties. Controls should be applied to nonbearing and mature trees when substantial populations of adults and nymphs are observed.

HAIL DAMAGE: The list of orchards reporting hail damage continues to grow following severe thunderstorms in the past week.

APPLE MAGGOT: The first apple maggot flies were captured on a baited red sphere near Plymouth in Sheboygan County during the June 28-July 4 reporting

period. Localized heavy rainfall in the previous 2 weeks apparently stimulated the emergence of flies near Dodgeville, East Troy, Elkhorn, Mequon, Rochester and Stoughton. In a Bayfield County orchard, flies were captured in a codling moth trap on 2 successive days. Early ripening cultivars are most attractive to female flies in July. The economic threshold for this pest is 1 fly per UNBAITED trap per week or 5 flies per BAITED trap per week.

Apple maggot fly *Tom Murray www.pbase.com*

SUMMER DISEASES: Recent rains have favored the development of summer diseases, particularly powdery mildew. Materials to control this and other diseases should be applied at 250 leaf wetness hours after petal fall, with careful attention to select only those products that do not promote scab resistance.

WEEDS

WEED SURVEY IN SOYBEANS: A survey of common weeds in Wisconsin soybeans was initiated on June 19. Similar to the recently completed survey of weeds in corn, the objectives of the current effort are to estimate yield loss due to weed competition and determine the approximate date on which post-emergence weed management occurs. During the June 19-July 7 monitoring period, survey specialists visited 29 soybean fields in Columbia, Dane, Dodge, Fond du Lac, Jefferson, Outagamie, Washington and Winnebago counties to document the average height and density of velvetleaf, common lambsquarters, common ragweed, giant ragweed, grasses and other broadleaf species. Examination of the 29 fields revealed that 17 had been cultivated or treated with herbicide by July 7, precluding any further weed measurements in those fields. The remaining sites will continue to be surveyed at 3-day intervals until weed management is noticed.

COMMON LAMBSQUARTERS: This species was present in 10 of 12 (83%) soybean fields untreated as of July 7. Plants averaged less than 9 inches tall and densities of 6-10 individuals per m^2 were noted. In a field surveyed in Jefferson County, plants measured 14 inches tall on average. It is recommended that this species and other common weeds be controlled before they reach 4 inches tall in 7.5-15 inch rows.

COMMON RAGWEED: Densities averaged less than 10 plants per m^2 at 3 of 12 (25%) survey sites in Washington or Fond du Lac counties. Individual plants were less than 6 inches tall, on average.

GIANT RAGWEED: This plant, overwhelmingly the tallest of the common weeds measured as part of the current survey, averaged 20 inches tall in Jefferson County by July 7. Densities within fields were low, averaging 1-5 plants per m^2, but many dense stands were observed along field borders at several other field locations.

Giant ragweed *Clarissa Hammond DATCP*

VELVETLEAF: Seven of 12 (58%) sites had low to moderate densities of velvetleaf, averaging 1-10 plants per m^2. The growth of this weed has kept pace with soybean plants, and individuals were difficult to differentiate from soybeans in the drilled fields. The average height of velvetleaf this week was 8 inches or less.

GRASSES: This generalized category is one of the most common and abundant of weeds in soybeans, noted at 8 of 12 survey sites (67%). Plants averaged 10 inches tall this week, and densities averaged 6-50 per m^2 in the fields surveyed. Three exceptionally grassy fields contained average densities exceeding 50 per m^2 over the entire field.

CANADA THISTLE: The purple flowers of this noxious weed are conspicuous in Wisconsin fields and pastures. Canada thistle spreads as a creeping perennial and by seed, and is particularly difficult to control due to its extensive underground root system.

WILD PARSNIP: Roadsides and field margins throughout southern and central Wisconsin have an abundance of yellow flowering wild parsnip plants, with pollinated flowers that are quickly transforming into mature seeds. Control measures should be taken now to prevent the mature seeds from entering the seedbank.

Wild parsnip seeds *Clarisssa Hammond DATCP*

NURSERY & LANDSCAPE

IMPORTED WILLOW LEAF BEETLE: Eggs have hatched on willows in Dodge County and second generation larvae are feeding in groups on the leaves. Plants should be checked at this time for the presence of this insect. Adults and larvae both feed on foliage of willows during the summer months, adults chewing holes and notches while the larvae skeletonize the leaves. Control of willow leaf beetles, although seldom needed, can be achieved by applying a residual spray when larvae are first noticed hatching from egg masses. Their damage generally is not fatal to willow trees.

HACKBERRY NIPPLE GALL: Many hackberry trees throughout the state are showing trace to moderate numbers of nipple galls formed by the hackberry nipple gall psyllid. The characteristic galls develop on the undersides of the leaves in response to feeding by a tiny, yellowish-orange psyllid nymph inside. Hackberry is the only known host of this psyllid.

Hackberry nipple gall *Liz Meils DATCP*

CATALPA SPHINX CATERPILLAR: In Dodge County, heavy infestations of first generation catalpa sphinx caterpillars are apparent on catalpa trees. The larvae can be identified by a distinctive black spine or “horn” at the tip of the abdomen. Defoliation by the developing caterpillars forces trees to use energy reserves to produce a second set of leaves, compromising tree vigor, winter survival and leaf emergence next spring. Control usually is not needed due to fluctuations in the population from year to year and the ability of the trees to grow new leaves. Manual removal of the larvae is recommended.

Catalpa sphinx caterpillars *Liz Meils DATCP*

WHITE PINE WEEVIL: Wilted tops caused by larvae of the white pine weevil are evident on Colorado blue spruce in Dunn County. This insect can be controlled by pruning out the infested area 6-10 inches below the wilted leader, before adults emerge in August. When the pruning cut is made, be sure the entire infestation has been removed by examining the inner sapwood, which should be light yellow not dark or discolored. Remove and properly dispose of pruned-out tops to prevent re-infestation.

Wilting of spruce caused by white pine tip weevil Konnie Jerabek DATCP

ANTHRACNOSE: The black necrotic spots that appeared on the leaf surface of silver maples in Dane, Sauk and many other counties earlier this season have been diagnosed as anthracnose, caused by a variety of fungi including *Gloeosporium*, *Collectrotrichum* and *Sphaceloma*. Thorough raking of fallen leaves and pruning to open the canopy and promote air flow will reduce its development next season.

FOREST

GYPSY MOTH SPRAY PROGRAM: A single aerial application of pheromone flakes is planned for locations in Ashland, Bayfield, Price and Taylor counties next week. If treatments are made on schedule, spraying efforts conducted by the Slow the Spread Program will be completed for the season.

GYPSY MOTH TRAPPING PROGRAM: Gypsy moth flight has not yet been observed or reported anywhere in the state. Trap setting was 93% completed as of July 9, with approximately 29,733 traps out of a total 32,000 deployed in 51 counties. Adult gypsy moths are expected to begin emerging in parts of southern Wisconsin in the next few days. Individuals moths live for about 2 weeks.

GYPSY MOTH: Larval mortality due to the common fungal disease *Entomophaga maimaiga* has been noted in Dane, Shawano and Juneau counties recently, at least one benefit of the rainy weather.

TRAPPING NETWORKS

BLACK LIGHT TRAPS: The first flight of European corn borer moth moths has not subsided at every black light trap location. Counts of 80 and 42 moths were registered at Cameron and Marshfield in the past week, representing the highest numbers reported this season. The first moths of the second flight are expected to begin emerging in the southern counties by July 19, following the accumulation of 1,400 degree days (base 50°F). True armyworm numbers at Janesville were similar to those registered during the previous reporting period (68 moths July 4-9 compared to 78 moths June 20-26), and remained below 10 moths at all other trap locations. Other noteworthy captures this week were 24 spotted cutworms at Marshfield, 21 celery loopers at Janesville, 37 spotted cutworms at Wausau, and a single tomato hornworm specimen at Mazomanie.

CORN EARWORM TRAPS: Low pheromone trap counts were reported for the second week, and light to moderate larval infestations have been detected in corn. Ordinarily, large flights of this insect are not observed in Wisconsin until mid- to late August, but extraordinarily high numbers of migrants were directed into the state on southerly winds last month. Individuals participating in the late-season corn earworm trapping network should deploy traps by July 17 and replace pheromone lures on a weekly basis. Counts for the period of July 4-10 were as follows: Cashton (8); Chippewa Falls (0); Janesville (6) Lancaster (0); Manitowoc (0); Tomah B (3).

CABBAGE LOOPER: Numbers remained relatively low at the Bourbonnias, Illinois, East Troy and Chippewa Falls sites where 29, 1 and 8 moths were captured, respectively. This migratory species usually does not appear in significant numbers until August or September.

APPLE INSECT & BLACK LIGHT TRAP COUNTS JULY 4 - 10

COUNTY	DATE	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	AM RED[5]	AM YELLOW[6]
Bayfield	7/04-7/10	Apple Hill	60		2.5 (3 max)		0	
Bayfield	7/04-7/10	Bayfield Apple			21.6 (73 max)			
Bayfield	7/04-7/10	Blue Vista	186		19.7 (29 max)	4	1	
Bayfield	7/04-7/10	Erickson's			8 (24 max)			
Bayfield	7/04-7/10	Hillcrest			0	5		
Bayfield	7/04-7/10	Lobermeier	0	0	2	35	0	0
Bayfield	6/30-7/08	Orienta	7	0	0	1		
Chippewa	7/04-7/10	Chippewa Falls	500	8	5	3.2	0	0
Crawford	7/04-7/10	Gays Mills	385	154	2	3	0	0
Dane	7/03-7/10	Deerfield	68	422	3	3	0	0
Dane	7/04-7/10	Stoughton	99	147	2	1	0	1
Dane	7/04-7/10	West Madison	64	108	13	3	0	0
Dodge	7/04-7/10	Brownsville	124	42	3	2	0	0
Fond du Lac	7/04-7/10	Campbellsport 1	100	22	50	0	0	0
Fond du Lac	7/04-7/10	Campbellsport 2	105	20	40	0	0	0
Fond du Lac	7/04-7/10	Malone	1200	30	2	3	0	0
Green	7/04-7/10	Brodhead	41	21	3	3	0	0
Iowa	7/04-7/10	Dodgeville	725	82	92	11	1	0
Iowa	7/04-7/10	Mineral Point	41	143	1	0	0	0
Jackson	7/04-7/10	Hixton	22	0	2	1	0	0
Kenosha	7/04-7/10	Burlington	150	73.7	3.7	3.7	0	0
Marinette	7/04-7/10	Niagara	970	0	8	6	0	0
Marquette	7/04-7/10	Montello	648	39	4	0	0	0
Ozaukee	6/26-7/09	Mequon (2 wks)	260	13	16.3	0	*0.2 **0.9	0
Pierce	7/04-7/10	Spring Valley	1197	11	2.5	5	0	0
Racine	7/03-7/10	Rochester	425	130	5.29	48	0	0
Racine	7/04-7/10	Raymond	2268	113	17	1	0	0
Richland	7/03-7/09	Hill Point	440	72	2	27	0	0
Sheboygan	7/04-7/10	Plymouth	360	40	10	0	**11	0
Waukesha	7/04-7/10	New Berlin	810	34	36	3	0	0
Walworth	7/07-7/10	East Troy	120	49	9	6	2	0
Walworth	7/07-7/10	Elkhorn	64	6	4	3	3	0

[1]Spotted tentiform leafminer; [2]Redbanded leafroller; [3]Codling moth; [4]Obliquebanded leafroller; [5]Apple maggot red ball; *Unbaited red ball; **Baited red ball; [6]Apple maggot yellow board; *Counts were averaged.

COUNTY	DATE	SITE	ECB[1]	TA[2]	BCW[3]	SCW[4]	DCW[5]	CE[6]	CEL[7]	WBCW[8]	FORL[9]	VCW[10]
Chippewa	7/03-7/09	Chipp. Falls	8	0	0	0	0	0	1	0	0	0
Columbia	7/03-7/11	Arlington	2	4	0	2	0	0	4	0	0	0
Dane	7/04-7/10	Mazomanie	—	—	—	—	—	—	—	—	—	—
Grant	7/02-7/10	Lancaster	0	10	1	0	0	0	9	0	6	0
Manitowoc	7/03-7/10	Manitowoc	2	6	0	3	0	0	0	0	0	0
Marathon	7/03-7/10	Wausau	9	6	0	37	0	0	5	0	0	0
Monroe	7/04-7/10	Sparta	—	—	—	—	—	—	—	—	—	—
Rock	7/04-7/09	Janesville	0	68	2	1	0	0	21	0	4	0
Walworth	7/03-7/10	East Troy	1	2	0	0	0	0	1	1	4	1
Wood	7/04-7/10	Marshfield	42	10	2	24	0	0	9	0	1	3

[1]European corn borer; [2] True armyworm; [3]Black cutworm; [4] Spotted cutworm; [5]Dingy cutworm; [6] Corn earworm; [7]Celery looper; [8]Western bean cutworm; [9]Forage looper; [10]Variegated cutworm.