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# 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
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## WEATHER & PESTS

Daytime temperatures were more seasonable in the past week, but intermittent rains prevented farmers from making any measurable progress toward planting corn and soybeans. Much of Wisconsin farmlands still remain under water and soil conditions generally are unfavorable for field operations. Several days of warm, dry weather and light winds are urgently needed for fields to dry completely. Alfalfa and winter wheat appear to be developing well despite recent weather, while other crops are progressing very slowly. The growing season is now 5-16 days behind last year and corn yield responses may begin to decrease if planting is delayed past May 10. The degree day total was 188 (base 50°F) at Madison on May 8, which compares to 283 last year.

## LOOKING AHEAD

EUROPEAN CORN BORER: Pupation of overwintered corn borers is expected to begin this weekend in the southern counties, with the first appearance of adults projected for May 16. In preparation for the spring flight of moths, black light traps were installed at Lancaster, Mazomanie, Sparta and other locations in the past week. A table listing weekly counts for 12 black light trap sites will be provided on the last page of each bulletin issue. Trappers should begin reporting by Thursday, May 15.

EASTERN TENT CATERPILLAR: Tents in wild cherry trees measured 7-8 inches long and 4 inches across in Columbia and Sauk counties on May 7, and larvae were in the second and third instars (¾-1½ inches). Smaller tents with second instar larvae were also common throughout the southern counties. Defoliation was minimal this week as foliage is not fully expanded and caterpillars remained confined to tents on the overcast days.

ALFALFA WEEVIL: Larvae from eggs laid last fall have started to hatch in the southern counties, signaling that surveys to assess larval populations and tip feeding damage should be initiated by May 12. Control of this pest is recommended when the economic threshold of 40% tip feeding is exceeded more than 7-10 days prior to harvest.

JUNE BEETLE: June beetles, *Phyllophaga* sp., were noted by May 4 in Dane and Sheboygan counties. Expect an increase in black light trap captures of these insects as flights begin in full during the next few weeks.

BLACK CUTWORM: Cutting by 4$^{th}$ instar larvae is projected to begin by May 21 in the southern districts and continue into June. Pheromone traps placed in Columbia, Dane, Grant, Green, Iowa, Lafayette, Monroe, Rock and Sauk counties registered a total of 83 moths

during the May 2-9 reporting period, with an average 2 moths per trap. High counts of 6-8 moths occurred near Janesville, Baraboo and Shullsburg, while Monroe County reported its first 3 moths of the season on May 6.

BLACK FLIES: Numbers and annoyance by these pests have increased markedly since May 6 in Dane, Grant and Wood counties, according to extension entomologist Phil Pellitteri. Milder temperatures in the past week evidently stimulated increased black fly activity in areas near streams.

## FORAGES

ALFALFA WEEVIL: Very low numbers of larvae hatched from overwintered eggs were swept from alfalfa for the first time on May 5. Counts were 3 per 50 sweeps or lower in 37 fields sampled in Columbia, Dane, Grant, Green, Iowa, Lafayette and Sauk counties. Most larvae were in the first and second instars. Adult weevils also have become far more prevalent in the last week and number as high as 20 per 50 sweeps in some Green County fields, although counts typically are below 4 per 50 sweeps. Surveys for larvae and tip feeding injury should be initiated in southern Wisconsin early next week, particularly in those alfalfa fields with a southern exposure. Expect the first apparent feeding injury by May 12.

*Clover leaf weevil larvae* *Krista Hamilton DATCP*

CLOVER LEAF WEEVIL: Few clover leaf weevil larvae were detected in scattered alfalfa fields. This insect may complicate alfalfa weevil survey results if the smaller alfalfa weevil larvae with black head capsules are not distinguished from the larger clover leaf weevil larvae with light brown head capsules. The clover leaf weevil larvae noted this week were considerably larger than the recently hatched first and second instar alfalfa weevil larvae. Do not include counts of this insect when scouting for alfalfa weevils.

CLOVER ROOT CURCULIO: Populations in alfalfa fields range from1-9 adults per 50 sweeps. In many instances these weevils outnumber adult alfalfa weevils, for which they may be confused. Adult clover root curculios are smaller, light gray, and lack the characteristic V-shaped dorsal marking evident on alfalfa weevils.

POTATO LEAFHOPPER: Adults are being swept with more frequency in comparison to last week, but numbers remain below 2 per 50 sweeps. Surveys detected leafhoppers in alfalfa as far north as Columbia County, but not in Dane, Green, Iowa and Sauk counties. The very low numbers of individuals found in Columbia and Richland counties since April 30 suggest that a few early

## DEGREE DAYS MARCH 1 - MAY 8

| LOCATION | 50°F | 2007 | DATE* | 48°F | 40°F |
|---|---|---|---|---|---|
| Dubuque, IA | 206 | 342 | 4/27/07 | 213 | 473 |
| Lone Rock | 191 | 324 | 4/27/07 | 187 | 431 |
| Beloit | 238 | 317 | 5/01/07 | 244 | 515 |
| Madison | 188 | 283 | 4/27/07 | 188 | 422 |
| Sullivan | 225 | 271 | 5/04/07 | 225 | 484 |
| Juneau | 203 | 261 | 5/01/07 | 202 | 444 |
| Waukesha | 191 | 261 | 4/29/07 | 191 | 436 |
| Hartford | 180 | 257 | 4/28/07 | 180 | 418 |
| Racine | 160 | 240 | 4/27/07 | 161 | 398 |
| Milwaukee | 153 | 238 | 4/27/07 | 155 | 384 |
| Appleton | 146 | 242 | 4/27/07 | 143 | 349 |
| Green Bay | 120 | 209 | 4/27/07 | 118 | 320 |
| Big Flats | 168 | 282 | 4/27/07 | 154 | 362 |
| Hancock | 169 | 271 | 4/27/07 | 157 | 364 |
| Port Edwards | 157 | 272 | 4/27/07 | 146 | 338 |
| La Crosse | 171 | 344 | 4/22/07 | 166 | 394 |
| Eau Claire | 149 | 295 | 4/23/07 | 138 | 332 |
| Cumberland | 126 | 263 | 4/22/07 | 111 | 288 |
| Bayfield | 60 | 167 | 4/22/07 | 47 | 185 |
| Wausau | 134 | 240 | 4/27/07 | 121 | 295 |
| Medford | 118 | 236 | 4/24/07 | 105 | 272 |
| Crivitz | 107 | 187 | 4/28/07 | 97 | 284 |
| Crandon | 103 | 205 | 4/27/07 | 85 | 235 |

*Method: ModifiedB50; Sine48; ModifiedB40 as of March 1, 2008.*
**DATE: date current degrees days 50°F were surpassed in 2007.*

migrants are distributed over a limited number of counties.

MEADOW SPITTLEBUG: The first nymphs of the 2008 growing season were collected in Sauk County by May 7, but were too small to make the frothy spittle masses associated with this pest. Meadow spittlebugs should begin to move onto alfalfa plants in higher numbers by next week.

TARNISHED PLANT BUG: Field observations in the southern counties show adult populations range from 0-11 per 50 sweeps, and average 5 per 50 sweeps. The highly mobile tarnished plant bugs overwinter in Wisconsin as adults, emerge early in spring, and may damage many vegetable, fruit, and flower crops in addition to alfalfa.

PEA APHID: Populations continue to be low in the south central and southwest districts where surveyors found an average of 3 pea aphids per 50 sweeps in 22 of 37 alfalfa fields sampled (60%). The highest count this week was 5 per 50 sweeps in Lafayette and Sauk counties. Egg hatch was first noted on April 30 in Richland County.

*Pea aphid next to alfalfa weevil eggs* *Krista Hamilton DATCP*

## CORN

SEEDCORN MAGGOT: Emergence of seedcorn maggot flies from the soil began around April 18 and should peak by May 10, after 200 degree days (3.9°C) have been surpassed. Expect heavy egg laying during this period. Corn, soybeans, peas and many vegetable crops are subject to damage by the subterranean maggots, which are favored by cold, wet spring weather conditions.

STRIPED SEEDCORN BEETLE: Adult populations were noted in alfalfa in the south central counties at the rate of 6 per 50 sweeps or lower. Scouting for this pest is not necessary unless corn seedlings are wilted, yellow, stunted or express symptoms associated with poor germination. Should this scenario develop, dig up damaged seeds in areas where plants have failed to emerge to check for any beetles that may be feeding inside.

BLACK CUTWORM: Growers are urged to carefully examine corn fields over the next several weeks for evidence of feeding by black cutworm larvae. Early instars feed on the corn foliage and the later instars feed through the stem at ground level or below to completely sever plants. Fields with grassy weed infestations, minimum tillage fields, late-planted fields, and those flooded earlier this spring are candidates for outbreaks. Corn seedlings are most at risk for feeding injury by the older larval stages of this pest in the 10-14 days after emergence.

## SOYBEANS

BEAN LEAF BEETLE: Preliminary surveys for overwintered bean leaf beetles in alfalfa have been negative so far. The first adults were swept from Lafayette County fields as early as May 1 last season, although a later emergence and fewer adults are expected this year due to cool spring temperatures and high winter mortality. Field specialists are prepared to begin the annual survey for bean leaf beetles in alfalfa just as soon as these overwintered adults become active.

## SMALL GRAINS

ENGLISH GRAIN APHID: Extremely light populations of 0-2 adults per 50 sweeps were found in winter grains in Dane, Columbia, Rock and Sauk counties. The high count for the week was 7 aphids per 50 sweeps noted near Evansville in Rock County. No aphids were detected in 9 of 16 fields sampled in the south central district.

## WEEDS

CRITICAL PERIOD OF WEED CONTROL: Corn and soybeans are most sensitive to weed competition in the

first 4-6 weeks after emergence. Effective weed control must be maintained during this period because yield reductions generally cannot be recovered. As corn begins to emerge this month and is in the most susceptible growth stages, be aware that fields should be kept weed-free to prevent yield loss.

In vegetable production systems, the critical period of weed control varies by crop and may extend throughout the crop's entire life cycle. Pumpkins, sugar beets and potatoes are more tolerant to competition, while spinach, fennel, garlic and leeks require a longer weed-free period to produce optimal yields. Planting weed tolerant crops in historically weedy fields offers more flexibility in timing weed removal and minimizes yield losses.

REDROOT PIGWEED: Field surveys in Columbia, Dane, Green and Lafayette counties found average-sized plants were 3 inches tall. Few seedlings were present as of May 7, but more are expected to emerge this month. Redroot pigweed is one of the most prominent and recognizable weeds in Wisconsin row crops, especially late in the season.

GIANT RAGWEED: Plants nearly doubled in size in the past week and population densities have increased considerably in southern districts. As one of the more competitive weeds in row crops, giant ragweed must be controlled in a timely manner and fields should be monitored through June for later-emerging populations.

*Giant ragweed* *Clarissa Hammond DATCP*

COMMON LAMBSQUARTERS: Seedlings are prolific across untilled fields in Dane and Columbia counties. Most plants are still less than 3 inches in height and at an easy stage to control. Lambsquarters seeds will continue to germinate for several weeks and unmanaged populations will compete with early emerging corn.

*Common lambsquarters seedlings* *Clarissa Hammond DATCP*

GIANT FOXTAIL: Small seedlings were noted in uncultivated south central fields this week. Giant foxtail is very difficult to identify in the seedling stage, but since its seeds remain attached to the developing root, extracting the entire plant, root and seeds from the soil should aid in proper identification.

CURRENT EMERGING WEEDS: Additional weeds observed this week were bull thistle (2"-3"), burdock (10"), Canada thistle (6"), carpetweed (flowering), common ragweed (3"-5"), dandelion (flowering), horseweed (4"-6"), shepherd's purse (flowering), and velvetleaf (2"-4").

## FRUITS

CODLING MOTH: The first cumulative capture of five male moths, referred to as the 'biofix', should soon occur in southern and central orchards. The codling moth flight period begins in Wisconsin from 201-340 degree days (base 50°F). Reference to the 50°F column in the degree day table on Page 2 shows the lower range of this interval has been exceeded at several southern locations, including Beloit, Dubuque, Juneau and Sullivan.

PROTEOTERAS: *Proteoteras aesculana* moths were captured in southern orchards this week, several days in advance of the expected codling moth flight. One individual was reported from Racine County and another was noted by a Dane County cooperator as his first

codling moth of the season. However, the degree day accumulation at his orchard reportedly was 168 on the date the moth was captured, and 201 degree days are required for the first flight of codling moths to begin. *Proteoteras* is visibly smaller than the codling moth, lacks bronze scales at the tips of the forewings, and has tiny black bumps on the wings.

SPOTTED TENTIFORM LEAFMINER: The peak of the first flight, forecast to occur at 150 degree days (base 50°F), has passed at some southern sites and egg laying presumably is underway. The optimal sample period for first generation sapfeeder leaf mines begins 10-14 days after a peak flight has occurred. Counts of 1 mine per 10 leaves indicate that populations are high and may increase to economic levels by the second generation. Standard sprays customarily provide adequate control against this insect, but orchards with populations greater than 0.1 mine per leaf or a history of infestation may require a supplementary application of an adulticide or larvicide. Consult the UWEX publication A3211 Spotted Tentiform Leafminer: A Pest of Wisconsin Apple Orchards for treatment options.
http://learningstore.uwex.edu/pdf/A3211.pdf

REDBANDED LEAFROLLER: Pheromone trap counts as high as 182 moths during the May 1-8 reporting period suggest that the first flight has peaked across southern and central Wisconsin. Egg hatch is underway and the first appearance of larvae should occur in southern orchards early next week. Control of first generation redbanded leafrollers is usually achieved by sprays directed at other apple insects at petal fall.

## VEGETABLES

CABBAGE MAGGOT: First generation cabbage maggot flies should start to emerge from soils in the southeast counties by May 12-14, once 300 degree days (base 43°F) have been reached and lilacs are in full bloom. Controls for this insect are directed against flies at peak emergence in order to minimize egg laying in early season cole crop transplants.

ONION MAGGOT: Egg hatch began by April 20 near Beloit. Anticipate emergence of the first and most damaging of three generations around May 14 in the south. Onion sets planted one week in advance of fly emergence are less susceptible to egg laying and larval feeding. Foliar insecticides, if used, must be applied at peak adult emergence around 680 degree days (base 40°F) to be effective. The degree day accumulation above a base temperature of 40°F was 515 at Beloit as of May 8.

## NURSERY & LANDSCAPE

SPRUCE NEEDLE DROP: Inspectors found light amounts of this fungal disease on numerous Colorado blue spruce trees in Brown, Langlade, Marathon, Portage, Waupaca and Wood County nurseries. Spruce needle drop infects branches randomly, causing second-year needles to turn purplish-brown and fall prematurely. As the needles drop, the crown thins and entire branches eventually become bare. These symptoms commonly are mistaken for Rhizosphaera needle cast, a similar disease which infects the current year's needles, produces rows of black fruiting bodies on the needles, and progresses upward from the lower branches. As with most fungal diseases, proper air circulation reduces the occurrence of needle drop. Fungicide treatments, if warranted, should be applied as needles emerge.

COLUMBINE LEAFMINER: Serpentine mines excavated by columbine leafminer larvae were observed on columbine leaves in Iowa and Outagamie counties. This aesthetic problem can be reduced by removing and destroying the affected leaves.

*Columbine leafminer* *Liz Meils DATCP*

BLACK KNOT: Samples of this common disease of plum and cherry have been received by the Plant Industry Bureau and the UW-Plant Disease Diagnostic Lab in recent weeks. Black knot is characterized by irregular,

black swollen galls or 'knots' which form on branches and vary in size from ½ inch to 1 foot long. Shoots and branches bearing knots should be pruned during the winter or early in spring, before the fungal spores are released.

*Black knot on cherry* *ISU Plant Disease Clinic*

SPIDER MITES: Several varieties of roses in Brown County showed moderately speckled or stippled foliage caused by spider mites, a major pest in greenhouses and nurseries. Chemical and biological control options include dormant horticultural spray oils, registered miticides, and introductions of commercially available predatory mites. Spider mites can be dislodged from houseplants with a spray of water or a soft cotton cloth dipped in mild detergent solution.

WINGED EUONYMUS SCALE: Overwintered female scales were noted on euonymus in Waupaca County. This dark brown scale is commonly found between the twigs and stems. Heavy infestations reduce plant vigor, inhibit photosynthesis, and may kill branches or entire plants. Control scale insects by pruning and destroying infested branches or applying a spray to newly hatched crawlers in early June, with four applications 10-12 days apart.

RABBITS: Serious injury to ornamental crabapples occurred in Marathon and Iowa counties over the winter months. Rabbit damage to trees with thin bark, such as willow, poplar and apple is common in Wisconsin during winters with deep snow cover. Winter feeding can be discouraged by wrapping individual tree trunks and establishing effective fencing.

# FOREST

GYPSY MOTH: Aerial applications to control gypsy moths in Wisconsin are tentatively scheduled to begin May 15-16. Infestations totaling 37,173 acres in Ashland, Bayfield, Clark, Green, Iowa, Jackson, Monroe, Richland, Rusk and Taylor counties will be aerially treated with *Bacillus thuringiensis* var. *kurstaki* (Btk), an organic pesticide certified by the Organic Materials Review Institute (OMRI). The Btk bacterium is a natural enemy that must be consumed by caterpillars to be effective. It poses no known risk to people, pets, plants, or animals, and non-target moths and butterflies are unlikely to be affected due to the timing of the sprays. Aerial treatments may continue into early June, depending on weather and the rate of gypsy moth development. Some sites will receive two applications of Btk, five to 10 days apart. Visit www.gypsymoth.wi.gov and select DATCP Slow the Spread Program, or call 1-800-642-MOTH for information and maps of spray sites.

*Spray plane applying Btk over Sauk County* *Chris Whitney DATCP*

# APPLE INSECT COUNTS MAY 1 - 8

| COUNTY | DATE | SITE | STLM[1] | RBLR[2] | CM[3] | OBLR[4] | AM RED[5] | AM[6] |
|---|---|---|---|---|---|---|---|---|
| Bayfield | 5/01-5/07 | Erickson Orchards | 0 | 0 | 0 | 0 | | |
| Bayfield | 5/02-5/08 | Orienta Orchard | | | | | | |
| Bayfield | 5/01-5/08 | Lobermeier | 0 | 0 | | | | |
| Bayfield | 5/02-5/08 | Bayfield Apple Co. | | | | | | |
| Brown | 4/30-5/07 | Oneida | 450 | 153 | | | | |
| Chippewa | 5/01-5/08 | Chippewa Falls | 3.3 | 33 | 0 | 0 | | |
| Crawford | 5/01-5/08 | Turkey Ridge | 462 | 168 | 0 | 0 | | |
| Dane | 5/01-5/08 | Deerfield | 950 | 98 | 0 | 0 | | |
| Dane | 5/02-5/08 | Stoughton | 22 | 114 | ***0.5 | 0 | | |
| Dane | 4/27-5/06 | West Madison | 8 | 43 | 0 | 0 | | |
| Dodge | 5/02-5/08 | Brownsville | 188 | 63 | 0 | | | |
| Fond du Lac | 5/02-5/08 | Campbellsport 1 | 10 | 182 | 0 | | | |
| Fond du Lac | 5/02-5/08 | Campbellsport 2 | 5 | | 0 | | | |
| Fond du Lac | 4/24-5/08 | Rosendale | 23 | 51 | | | | |
| Fond du Lac | 5/02-5/08 | Malone | | | | | | |
| Grant | 5/01-5/08 | Sinsinawa | 45 | 53 | *1* | | | |
| Green | 5/02-5/08 | Brodhead | 3 | 111 | | | | |
| Iowa | 5/01-5/08 | Dodgeville | 425 | 67 | | | | |
| Iowa | 5/01-5/08 | Mineral Point | 0 | 119 | | | | |
| Jackson | 5/02-5/08 | Hixton | 740 | 42 | | | | |
| Kenosha | 5/01-5/08 | Burlington | 100 | 77 | 0 | | | |
| Marquette | 4/28-5/04 | Montello | 63 | 6 | 0 | 0 | | |
| Marinette | 5/02-5/08 | Niagara | 0 | 0 | | | | |
| Ozaukee | 5/01-5/08 | Mequon | 63 | 55 | | | | |
| Pierce | 5/02-5/08 | Beldenville | 20 | 33 | 0 | 0 | | |
| Pierce | 5/01-5/08 | Spring Valley | 246 | 178 | | | | |
| Racine | 5/01-5/08 | Rochester | 102 | 160 | 0 | | | |
| Racine | 5/01-5/08 | Raymond | 873 | 65 | | | | |
| Richland | 5/01-5/07 | Hill Point | 180 | 55 | | | | |
| Richland | 5/01-5/08 | Richland Ctr E | | | | | | |
| Richland | 5/01-5/08 | Richland Ctr W | | | | | | |
| Sauk | 5/01-5/08 | Baraboo | | | | | | |
| Sheboygan | 5/01-5/08 | Plymouth | 1089 | 182 | 0 | | | |
| Waukesha | 5/01-5/08 | New Berlin | 605 | 22 | | | | |
| Walworth | 5/01-5/08 | East Troy | | | | | | |
| Walworth | 5/01-5/08 | Elkhorn | | | | | | |

[1]Spotted tentiform leafminer; [2]Redbanded leafroller; [3]Codling moth; [4]Obliquebanded leafroller; [5]Apple maggot red ball; [6]Apple maggot yellow sticky board; *Unbaited red ball; **Baited red ball; ***Probably *Proteoteras* sp.