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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

Farm activity accelerated on the warm sunny days early in the week, but only a nominal amount of planting was accomplished in between rains. The heavy showers and unseasonably cool temperatures that followed did not benefit most farmers who were already behind in their field work and contending with soil moisture surpluses. The season remains four to nine days behind last year depending on the region of the state and the threshold used. As of April 24, the degree day accumulation at Madison was 107 using a base of 50°F, which compares to 161 degree days on the same date last spring. Insect development has been relatively slow for this time in April and many of the earliest insects of the season have yet to emerge.

LOOKING AHEAD

GYPSY MOTH: Ten percent hatch should occur between April 24 and May 2 at sites in Green, Dane, Milwaukee, Sauk, Monroe, Adams, and Green Lake counties, according to the BioSim Gypsy Moth Phenology Model. Field observers found intact egg masses and no newly hatched larvae at several locations surveyed in Ashland, Clark, Dane, Green, Milwaukee, Monroe, Rock, Rusk, and Sauk counties in the past week. Phenological indicators such as oak leaf development, saucer cup magnolia petal drop, redbud beginning bloom, and various models are used annually to time the start of aerial spray applications. The first of two *Bacillus thuringiensis* (Bt) treatments will be applied when 20% of larvae have reached the second instar stage, an event tentatively projected for May 15-19 in the counties listed.

PICNIC BEETLE: Low numbers of picnic beetles, *Glischrochilus spp.*, were observed in pheromone traps intended for black cutworm moths. These “non-target” pests likely were attracted to the pink propylene glycol preservative contained in the traps and not the pheromone lure. Picnic beetles have been implicated in the transmission of oak wilt fungus, but are not considered important vectors of oak wilt disease. This find signals that larger numbers of these nuisance insects are forthcoming, and their attendance should be anticipated when dining out-of-doors on warm spring days ahead.

BLACK CUTWORM: Female black cutworm moths have begun to deposit eggs on grass blades in wet, weedy southern Wisconsin fields. Areas subject to spring flooding are at an increased risk of infestation by the larvae of this pest, sometimes referred to as “overflow worms” due to their frequent occurrence in low, flooded fields. When plowing is delayed by flooding and grassy weeds are allowed to grow dense, black cutworm infestations are often established by the time corn is

planted. Growers with such field conditions should be alert to the possibility of outbreaks next month.

Flooded field at risk of black cutworm infestation Krista Hamilton DATCP

TRUE ARMYWORM: The first migrant adults of the season were reported this week in the black light trap at Janesville. A total of five moths were captured on the evenings of April 17-23. Heavy catches of moths in black light traps often precede armyworm outbreaks by three to four weeks. Growers of oats, peas and corn are advised to consult black light data in future issues of the bulletin for trap counts at a nearby site.

EASTERN TENT CATERPILLAR: Emergence of larvae from overwintered egg cases is probable in the week ahead, which again is several days later than in 2007. Webbing should begin appearing on chokecherry trees in the southern counties by the first week of May.

FORAGES

ALFALFA WEEVIL: The first appearance of this insect was noted on April 23 in Sauk County alfalfa fields where adults were swept at the rate of 1-2 per 50 sweeps. Based on current degree day accumulations (base 48°F), 160 degree days remain before surveys should be initiated in the Janesville area. Expect larvae to become noticeable in advanced fields with a southern exposure by May 5.

TARNISHED PLANT BUG: Low numbers of adults were observed in Columbia and Sauk County alfalfa as of April 23. Sweep net counts in 4-6 inch fields ranged from 1-4 per 50 sweeps.

DEGREE DAYS MARCH 1 - APRIL 24

LOCATION	50°F	2007	NORM	48°F	40°F
Dubuque, IA	110	193	74	119	293
Lone Rock	105	182	65	106	267
Beloit	140	185	71	147	331
Madison	107	161	63	109	261
Sullivan	131	159	—	134	207
Juneau	117	154	—	120	278
Waukesha	109	161	68	112	273
Hartford	103	157	39	105	260
Racine	87	153	13	89	245
Milwaukee	83	150	35	87	237
Appleton	87	134	41	87	215
Green Bay	70	113	41	70	193
Big Flats	97	158	—	92	222
Hancock	101	150	45	97	227
Port Edwards	92	151	—	87	205
La Crosse	94	189	102	94	241
Eau Claire	85	155	62	79	199
Cumberland	75	134	—	67	176
Bayfield	39	78	3	31	111
Wausau	82	124	44	77	181
Medford	68	120	24	62	159
Crivitz	71	95	32	65	179
Crandon	65	100	—	56	142

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

WINTER INJURY: Growers statewide have reported very little winterkill as stands begin to regenerate. Surveys in the southwest and south central counties found only scattered fields with minor injury, despite severe winter conditions that seemed conducive for heavy damage.

PEA APHID: Nymphs could not be found this week, although a small fraction of overwintered eggs should have started to hatch in the south. This event was noted on April 24 last year.

CORN

BLACK CUTWORM: Southerly air currents continue to direct low numbers of migrant black cutworm moths into the state. Pheromone trap counts ranged from 0-9 moths for the April 18-24 reporting period, with the first concentrated captures of 8-9 male moths in two nights

registered near Dodgeville in Iowa County, New Diggings in Lafayette County, and Footville in Rock County. These captures mark the start date (April 24) to begin counting degree days to forecast when damage should occur. The cutting period begins 300 degree days (base 50°F) after the first concentrated capture of migrant adults. Corn seedlings are most at risk of feeding injury during the 10-14 days following emergence.

SOYBEANS

BEAN LEAF BEETLE: Winter mortality estimates for the bean leaf beetle range from 52-60% in southern Wisconsin, to 69% in the northern counties. The state average mortality of 58% suggests that well over half of the bean leaf beetles that entered the 2007-08 winter are unlikely to emerge this spring. Estimates were calculated using the University of Minnesota predictive model, which accumulates the number of "cooling" degree days below a base mean daily temperature of 37°F. The same model predicted 36-60% bean leaf beetle mortality and a state average of 46% mortality following the milder winter of 2006-07.

A survey to assess the distribution and relative abundance of the overwintered generation of bean leaf beetles is planned for next month. Based on the UMN model predictions, surveyors expect to find fewer beetles during the 2008 spring survey in comparison to last spring. Any surviving beetles pose a risk of defoliation to early emerging soybeans in June and July.

PREDICTED WINTER MORTALITY OF BEAN LEAF BEETLE IN WISCONSIN, 2007-2008.

COUNTY	*% MORTALITY 2008*	*% MORTALITY 2007*
Milwaukee	53	36
Green	53	43
Grant	55	40
Dane	52	43
Columbia	54	47
Sauk	60	43
Brown	54	43
La Crosse	56	43
Eau Claire	64	50
Marathon	64	51
Wood	67	50
Oneida	69	60
AVERAGE	*58*	*46*

WEEDS

COMMON DANDELION: Common dandelion is among the most prevalent weed species observed so far this season. Already large plants are evident in agricultural fields across southern Wisconsin and flowering could begin as early as next week. Dandelion control should be initiated prior to seed formation. Once seed set occurs, even the slightest disturbance by wind, vehicles, or animals will disperse seeds great distances.

WHITE CAMPION: Plants four to eight inches in height were observed in Iowa, Green and Lafayette County fields. White campion is rated by Wisconsin farmers as one of the most troublesome weeds in corn and soybeans due in part to its versatile growth habits. This species can act as a winter annual, summer annual, biennial, or short-lived perennial. Control may be necessary at different points in the season, depending on when emergence occurs.

White campion *Clarissa Hammond DATCP*

COMMON LAMBSQUARTERS: Plowing has triggered common lambsquarters cotyledons to emerge through cracks in freshly turned soils in Green, Iowa, and Lafayette counties. Lambsquarters seedlings usually appear in clumps or patches due to innate dispersal mechanisms of the mature plants and the large volume of seeds produced.

WINTER ANNUALS: The winter annuals shepherd's purse, common chickweed, and field chickweed are in the early flowering stages in Iowa County. These species get an earlier start than other weeds by emerging in fall, remaining dormant through winter, and flowering in

early spring. Winter annuals and perennials are usually the tallest weeds present when spring fieldwork begins.

Common chickweed Clarissa Hammond DATCP

MANURE APPLICATIONS: The common practice of applying manure to fields, while providing nutrients for future plantings, is also a mode of introduction for new weed species. Growers are urged to watch for intermittent or evenly spaced weed patches that appear to follow equipment tracks through a field, as these could be the result of weed seeds introduced by a recent manure application (see picture below). These patterns of weed emergence should become apparent one week to ten days after manure is spread. Management strategies may need to be adjusted to account for any newly introduced weed species.

Weeds spread by farm equipment Clarissa Hammond DATCP

CURRENT EMERGING WEEDS: Average first emergence dates for ladysthumb, common mallow and wirestem muhly range from April 19-25, based on historical data from the Arlington research station weed garden. It is probable that these species have begun to emerge in advanced areas, although none were noted this week. The weed species that were sighted during surveys this week include: black medic (6"-8"), common chickweed (4"-6"), common dandelion (4"-5"), common lambsquarters (1/2"), common yarrow (3"-4"), field chickweed (4"-6"), horseweed (4"-6"), prostrate knotweed (2"-4"), quackgrass (10"), shepherd's purse (10"-12"), smooth crabgrass(10"), velvetleaf (1/2"), white campion (10"-12"), and yellow rocket (2"-3").

FRUITS

SPOTTED TENTIFORM LEAFMINER: The optimal sample dates for first generation spotted tentiform leafminers are tentatively projected for May 4-8 near Beloit, May 13-17 near Racine, May 8-12 near Madison, May 11-15 near Eau Claire, and May 20-24 near Bayfield. Populations of this pest should be evaluated by sampling 10 terminals and fruit spurs per tree on 2-3 trees in each area of the orchard to determine the average number of sapfeeder leafmines per leaf. An average of 0.1 mine per leaf indicates that populations are high and may increase to economic levels by the second generation if no control measures are taken. The projected sample dates are based on current degree day accumulations and are subject to change as temperatures increase in the next weeks. A large percentage of leafmines should be visible on the undersides of leaves about 10-14 days after a peak capture has occurred in pheromone traps.

REDBANDED LEAFROLLER: Moths are active in southern orchards and should begin to appear in central and northern orchards after 25-78 degree days (base 50°F) are reached. Pheromone trap counts for the week of April 17-24 ranged from 0-97 moths.

DEER: The cooperator near Beldenville in Pierce County reported that damage caused by deer during the 2007-08 winter was the worse he has observed in his 20 years as an apple grower.

MEADOW VOLE: Considerable meadow vole damage was reported on orchard plantings in some central and northwestern localities. Densities of this rodent, *Microtus pennsylvanicus*, surge every three to five years if populations or habitat are not reduced. Meadow voles girdle the trunks of apple trees beneath the cover of snow

and their damage may not be noticed until the snow melts. The high frequency of winter storms and record amounts of snow last winter limited food resources and created conditions favorable for vole damage to apple trees.

Meadow vole, Microtus pennsylvanicus *Laurie Smith USDA*

NURSERY & LANDSCAPE

Annual nursery dealer inspections are just getting underway. The season is off to a slow start as nursery dealers are hesitant to bring out stock after damage was caused by late frosts last year.

COLLETOTRICHUM STEM BLIGHT: This blight was found in a Waukesha County nursery where it caused the foliage of Creeping phlox 'Candystrip' to dry up and turn brown. The occurrence of Colletotrichum blight can be minimized by controlling moisture levels and lowering greenhouse temperatures if possible.

Black root rot on creeping phlox *Liz Meils DATCP*

TOBACCO RATTLE VIRUS: Laboratory testing confirmed Tobacco Rattle Virus (TRV) in potted Old Fashioned Bleeding Heart and peony plants pulled from production in Kewaunee County last week. The bleeding heart foliage exhibited a pale green mosaic pattern characteristic of TRV, while the peony was chlorotic with reddish leaf margins, symptoms very atypical for this virus. TRV has been reported on ornamentals such as astilbe, barrenwort, and coral bells for several years, and is an established potato pest in the western United States. Reports of TRV on nursery plants in the Midwest are more recent. This virus can be transmitted by stubby-root nematodes in the genera *Paratrichodorus* and *Trichodorus*, which are prevalent in Wisconsin soils and have wide host plants ranges. TRV is also spread by contaminated cuttings, graftings and seed.

TRV symptoms on bleeding heart *Anette Phibbs DATCP*

Atypical TRV symptoms on peony *Anette Phibbs DATCP*

BLACK ROOT ROT: Symptoms of the brown root rot fungus, *Thielaviopsis basicola*, were found on Creeping

Phlox 'Sub Red Wing' during a greenhouse inspection in Kewaunee County. The affected potted plants appeared nutrient deficient and were generally small with tip dieback. Root examination revealed characteristic black areas where the tissue was colonized by this soil-borne fungus. Brown root rot is a widely distributed pathogen that infects the roots of many vegetables, woody plants, annuals, and perennials, particularly pansy and vinca. To avoid contamination, pay close attention to sanitation practices and do not mix growing media with field soil.

Black rot on phlox roots *Anette Phibbs DATCP*

SEED

BROWN BAG SEED: Buying or selling protected varieties of seed from unauthorized dealers is a violation of federal law. All seed offered for sale in Wisconsin, whether in bags or bulk containers, must carry a seed label that includes the lot number, origin of the seed, percentage in weight of all weed seeds, percentage by weight of other crop seeds, germination percentage, and the month and year the seed was tested. For seed mixes, the different components must be identified by percent of weight from highest to lowest. All seed labels must also carry the name and address of the seed labeler or the seed distributor.

Farmers are advised to avoid buying "brown bag seed" and only select professionally produced seed varieties or certified seed. Professionally produced seed varieties may belong to a private seed company or a public institution and are identified by a special tag or printed information on the bag. The federal U.S. Plant Variety Protection Act (PVPA) provides some legal protection to the developer of the plant variety, similar to a copyright.

Farmers are allowed to save protected seed varieties for future planting on their lands, but are prohibited from selling certain varieties to other growers. Certified seed is marked by a blue tag on the bag and is tested in a laboratory for germination, purity and the absence of noxious weed seeds. In Wisconsin, the official seed-certifying agency is the Wisconsin Crop Improvement Association.

By purchasing certified seed or PVPA varieties from approved seed dealers, farmers are assured the seed has an expected performance standard in yield, pest resistance, and other agronomic factors.

PEST EXTRAS

ASIAN LONGHORNED BEETLE: On April 17 the Asian longhorned beetle, *Anoplophora glabripennis*, was declared eradicated from Illinois, nearly 10 years after it was found in trees in a Chicago suburb. The discovery of Asian longhorned beetle in the summer of 1998 led to the removal of approximately 1,771 hardwood trees and the establishment of a 35-square-mile quarantine area in and around Chicago in the years to follow. The most recent infestation in the Oz Park area received final chemical treatments in 2006. Rigorous surveys since 2003 have detected no additional Asian longhorned beetles or further evidence of infestation. Illinois is the first and only U.S. state to successfully eradicate this invasive foreign pest. Separate infestations currently are being eradicated in portions of New York and central New Jersey. USDA officials believe Asian longhorned beetle was introduced into the U.S. in wood crates or pallets associated with cargo shipments from Asia.

Asian longhorned beetles *www.dnr.state.oh.us*

APPLE INSECT COUNTS APRIL 17 - APRIL 24

COUNTY	DATE	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	AM RED[5]	AM[6]
Bayfield	4/17-4/24	Erickson Orchards	0	0				
Bayfield	4/17-4/24	Orienta Orchard						
Bayfield	4/17-4/24	Lobermeier	0	0				
Bayfield	4/17-4/24	Bayfield Apple Co.						
Brown	4/17-4/24	Oneida						
Chippewa	4/17-4/24	Chippewa Falls	0	0				
Crawford	4/17-4/24	Gays Mills						
Crawford	4/17-4/24	Turkey Ridge						
Dane	4/18-4/24	Deerfield	357	58				
Dane	4/17-4/24	Stoughton	52	97				
Dane	4/17-4/24	West Madison						
Dodge	4/18-4/24	Brownsville	0	4				
Fond du Lac	4/18-4/24	Campbellsport 1	6	32				
Fond du Lac	4/18-4/24	Campbellsport 2	3	46				
Fond du Lac	4/17-4/24	Rosendale						
Fond du Lac	4/17-4/24	Malone	75	15				
Grant	4/17-4/24	Sinsinawa	5	27				
Green	4/17-4/24	Brodhead						
Iowa	4/17-4/24	Dodgeville	40	14				
Iowa	4/17-4/24	Mineral Point	0	58				
Jackson	4/18-4/24	Hixton	0	0				
Kenosha	4/17-4/24	Burlington	6	25				
Marquette	4/13-4/20	Montello	0	0				
Marinette	4/17-4/24	Wauzaukee						
Ozaukee	4/18-4/24	Mequon	0	0				
Pierce	4/17-4/24	Beldenville	0	0				
Pierce	4/17-4/24	Spring Valley	-	-				
Racine	4/17-4/24	Rochester	0	78				
Racine	4/17-4/24	Raymond	93	14				
Richland	4/16-4/23	Hill Point	0	15				
Richland	4/17-4/24	Richland Ctr E						
Richland	4/17-4/24	Richland Ctr W						
Sauk	4/17-4/24	Baraboo						
Sheboygan	4/17-4/24	Plymouth						
Waukesha	4/17-4/24	New Berlin	187	5				
Walworth	4/17-4/24	East Troy						
Walworth	4/17-4/24	Elkhorn						

[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 sticky board.