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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

Mostly dry, cool weather continued across the state, with temperatures near or just below seasonal values. Daytime highs ranged from the lower 50s in the southeast and northwest to the mid-70s in the southwest. Lows were in the mid-20s to low 40s and early-week freezes were noted in the north-central and northeast areas. A few light showers fell on Wednesday, otherwise conditions remained fairly dry. According to a National Weather Service report, average temperatures this month have been lower than those of the preceding March at Madison, Milwaukee and many other Wisconsin locations. The expected average temperature for April 2012 at Madison is 47.8°F, which would be 2.3°F lower than the March average of 50.1°F. This improbable scenario was driven by a nearly stationary upper-level jet stream to the west and north of the state last month that allowed uncharacteristically warm, southerly air to flow into the Great Lakes region. Conversely, April weather has been brisk, unsettled, and more typical of spring in Wisconsin.

LOOKING AHEAD

ALFALFA WEEVIL: Larval counts have shown a marked increase in the last reporting period. Surveys in the south-central and southwest areas yielded an average of 11 per 50 sweeps, with an exceptionally high count of 700 per 50 sweeps near Orfordville in Rock County. Leaf tip feeding injury was generally less than 10%, although scattered fields showed 30-90% injury. Damage is expected to become more pronounced next week. Timely harvest will interrupt larval feeding and save the expense of insecticide control.

PLUM CURCULIO: The spring migration of beetles into apple orchards has resumed after cool temperatures slowed their activity last week. Apple growers are advised to carefully examine early blooming cultivars at petal fall and in the 10-14 days afterwards for signs of injury. Sprays directed against the adults to prevent oviposition are the conventional form of control.

BLACK CUTWORM: Moths continued to arrive in substantial numbers. High counts for the week were 53 moths at Belmont and 45 at Platteville. Based on the phenology model for this insect, 183 degree days, or about 20 days, remain before larvae in south-central Wisconsin reach the plant-cutting fourth instar stage. This event has been projected for May 15, but could begin sooner if warmer weather prevails early next month.

BROWN MARMORATED STINK BUG: Established populations of the invasive brown marmorated stink bug are suspected in Brown and Dane counties but have not been confirmed thus far. Last winter, two specimens were found by a Green Bay homeowner and another was collected at a Middleton residence. All specimens were found indoors. DATCP specialists believe these stink bugs are representatives of local populations and

are planning a small-scale detection survey for next month.

POTATO LEAFHOPPER: Migrants are appearing in southern Wisconsin alfalfa fields. Counts this week were very low and ranged from 1-3 per 50 sweeps. The spring arrival of this migratory pest commonly coincides with the first alfalfa harvest.

TRUE ARMYWORM: Locally heavy flights have been documented this month, signaling a strong potential for larval outbreaks in small grains and corn. Moths are abundant in grassy vegetation and egg deposition is expected to be heavy at this time. Consultants and growers should anticipate larval armyworms appearing in fields in the next 2-3 weeks.

True armyworm moth Krista Hamilton DATCP

FORAGES

TARNISHED PLANT BUG: Levels have not changed significantly since the last report. Counts still average 3-4 per 50 sweeps in the southern half of the state. Nymphs were not observed this week.

ALFALFA WEEVIL: Larval populations are rapidly increasing in first growth alfalfa. The average count of 11 per 50 sweeps from April 20-26 compares to 3 per 50 sweeps last week. An extraordinarily high count of 700 larvae per 50 sweeps (14 per sweep) was found in the Orfordville area of Rock County. Leaf tip damage associated with this insect is not yet conspicuous in most fields, but this will change in the next 1-2 weeks. Alfalfa fields should be sampled repeatedly through harvest and until new growth of the second crop is established. A defoliation level of 40% or greater in the first crop signals the larval population is high and some form of control is justified.

DEGREE DAYS JANUARY 1 - APRIL 25

LOCATION	50°F	2011	NORM	48°F	40°F
Dubuque, IA	382	106	181	389	722
Lone Rock	387	96	—	381	701
Beloit	392	116	184	392	718
Madison	362	81	171	360	669
Sullivan	361	87	154	355	665
Juneau	334	72	—	328	631
Waukesha	291	60	—	287	580
Hartford	282	60	—	280	566
Racine	260	50	—	262	541
Milwaukee	249	50	136		
Appleton	270	48	126	262	545
Green Bay	221	35	117	218	490
Big Flats	330	63	—	314	617
Hancock	315	59	158	300	602
Port Edwards	302	51	155	290	586
La Crosse	351	86	188	349	673
Eau Claire	288	64	154	282	578
Cumberland	230	56	119	225	506
Bayfield	248	43	—	131	352
Wausau	248	40	122	239	519
Medford	241	41	101	236	516
Crivitz	193	35	—	183	449
Crandon	193	35	90	184	448

Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2012. NORMALS based on 30-year average daily temps, 1981-2010.

POLLINATORS: DO NOT spray blossoming alfalfa. This can result in heavy bee losses to honey producers and high mortality in pollinators. The recommended harvest date for alfalfa is at “first flower”.

PEA APHID: Surveys in Crawford, La Crosse, Jefferson, Sauk, Richland and Rock counties found an average of 13 aphids per 50 sweeps. This represents a minor increase over 9 per 50 sweeps noted last week.

SMALL GRAINS

RUST OF SMALL GRAINS: The alternate hosts of several rust species (*Puccinia* spp.) are beginning to show signs of rust development, well in advance of the average date. Pycnia development was observed in Dane County on common barberry, the alternate host of stem rust (and stripe rust, it was recently determined) of various grains

and other grasses, and a cooperator reported development of rust signs on buckthorn, the alternate host of crown rust of oats and other grasses. Common barberry was the target of 62 years of eradication efforts (1918-1980) by the USDA and Midwestern states, in an attempt to eliminate sexual reproduction of stem rust and thus stabilize the race populations. Stable races have allowed wheat breeders to use and maintain effective resistance genes for stem rust control.

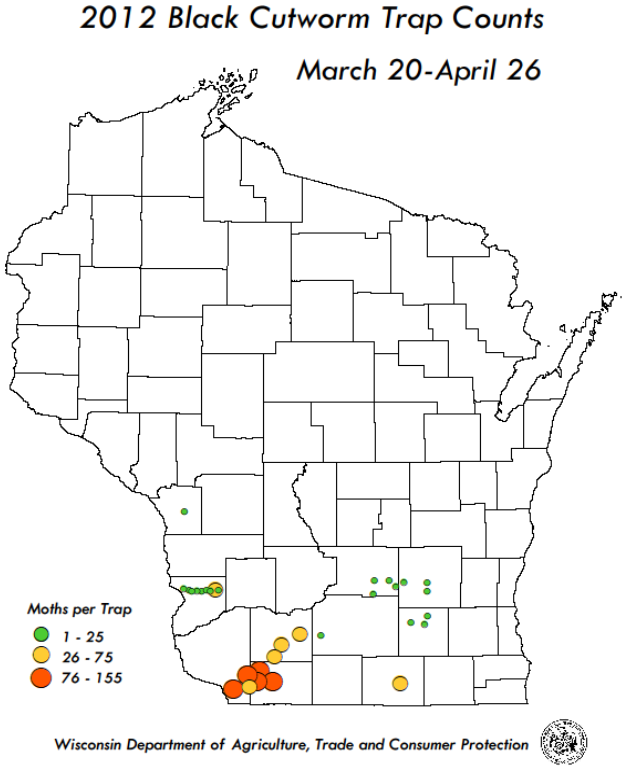
Crown rust on buckthorn Liz Meils DATCP

Recent reports from the southern U.S. suggest that a new race of stripe rust may be widespread, as wheat varieties previously resistant are showing susceptibility. Rust development in Wisconsin wheat is often driven by spores blown on winds from the south in what has been dubbed the "Puccinia pathway". As the Wisconsin crop shifts from tillering to jointing and begins flag leaf development, rust infection becomes more likely and more critical. DATCP wheat survey efforts will increase over the next few weeks. Growers should also begin scouting susceptible varieties.

CORN

TRUE ARMYWORM: Migrants have arrived in significant numbers this month. A major flight was recorded on the night of April 15 and the black light traps at East Troy and Janesville have registered counts of 71-86 moths in the past two weeks. True armyworm flights can precede larval outbreaks by 3-4 weeks, so these numbers should be viewed as an early warning of potential problems.

BLACK CUTWORM: Larvae resulting from the April migration are in the early instar stages and signs of their feeding (i.e. small pinholes in the leaves) should be detectable in emerging corn fields. At current temperatures, the primary damage period is expected to begin by May 15 in southern Wisconsin and 1-2 weeks later in the central and northern areas. Regular scouting is recommended from emergence until the five-leaf stage.



EUROPEAN CORN BORER: The first flight of spring moths may begin next week at advanced locations. Most overwintered larvae are in the pupal stage, which requires 10 days to complete at temperatures of 65°F. Degree day accumulations at Beloit, Lone Rock and Platteville have surpassed 374 (base 50°F) and are now suitable for moth emergence.

European corn borer moth woodcreeper flickr.com

CORN ROOTWORM: Beetle surveys conducted last August indicate higher populations for some areas of the state in 2012. More than a quarter of the 229 corn fields sampled had counts that met the treatment criteria of 0.75 beetle per plant, and many of these sites were concentrated in the south-central, southwest and central districts. Beetle counts in the northern districts were below average and few problems are anticipated there. Results of the survey suggest high populations of larvae may occur in individual fields in the southern and central areas this summer unless effective management practices are applied.

FRUITS

CODLING MOTH: Apple orchards in Dane, Grant, Rock and Richland counties registered the first moths of the season on the night of April 18. Counts since then have been very low and the biofix has not yet been established. Codling moth flight occurs consistently between the hours of 5:00 and 10:00 pm in our region, and winds must be below 3 mph and temperatures above 62°F during these hours for mating to occur. Since evening temperatures have not been conducive for activity, few additional moths were reported this week.

TARNISHED PLANT BUG: Nymphs can be anticipated by early May. Strawberry plants beginning to bloom should be checked weekly for both adults and nymphs. Sprays applied against the small, first and second instar stages are very effective and can eliminate the need for a second treatment. The economic threshold for this insect in strawberries is 4 per 20 sweeps.

Tarnished plant bug *Krista Hamilton DATCP*

SPOTTED TENTIFORM LEAFMINER: Moth emergence peaked in the last 1-2 weeks and is now declining. Populations in the southern two-thirds of the state consist mostly of first generation sapfeeder larvae. The recommended scouting procedure is to sample 10 terminals and fruit spurs per tree on 2-3 trees per orchard block. Sapfeeder mines should be noticeable on the undersides of leaves. The economic threshold is 1 mine per 10 leaves.

ORIENTAL FRUIT MOTH: The first Oriental fruit moths (OFM) of the year also appeared on April 18, in a Rock County apple orchard. OFM flight usually begins earlier than the codling moth flight, but was delayed this month due to poor flight conditions.

VEGETABLES

ONION MAGGOT: Flies of the first and most damaging generation are emerging at advanced sites. Cultural controls, including removal of onion cull piles and crop rotation, are increasingly important now that the onion maggot has developed resistance to many of the insecticides used as granular furrow treatments at seeding. Good fall sanitation is the best preventive measure.

ASTER LEAFHOPPER: Migrants are common in alfalfa and grains across the southern half of the state. The average count in alfalfa for the period of April 20-26 was 5 per 50 sweeps, with a range of 2-18 per 50 sweeps. Their early arrival and relative abundance indicates vegetables and other susceptible hosts are at increased risk of aster yellows disease next month. The aster yellows organism must be retained by the leafhopper for three weeks after being acquired before it can be transmitted to another host plant, but some of the migrating population may have passed through this period by the time they arrive in Wisconsin. Growers are advised to begin watching for symptomatic plants early in May.

WEEDS

HERBICIDE RESISTANCE: As herbicides are applied to fields in the coming weeks, producers are advised to note the “site of action” or herbicide group number listed on the label. Rotating herbicides with different sites of action between pre-and post-emergence applications, or combining two different site-of-action herbicides (with overlapping control spectrums) when tank mixing, is key to maintaining herbicide effectiveness.

CREEPING CHARLIE: The optimal time for treatment of creeping Charlie is during full bloom, usually between 200-350 degree days (base 50°F). This window remains

open in the northern half of the state and in the far southeastern counties, but has closed elsewhere.

WINTER ANNUALS: Winter annual weed problems are becoming more apparent as heat units accumulate. Some winter annuals such as shepherd's purse are beginning to produce seed, while field pennycress, prickly lettuce and a few others are still in the vegetative and early flowering stages but are more than 12 inches tall. Uncultivated fields with existing winter annual weed problems are preferred sites for black cutworm infestation and will prove increasingly difficult to control with herbicides if weed growth continues much longer.

NURSERY & FOREST

WHITE PINE BLISTER RUST: Cankers on the bark of eastern white pines began sporulating by March 23 this year. This event corresponds phenologically with leaf expansion of the alternate hosts, gooseberries and currants. Removing cankers beyond 4-6 inches from the main stem can effectively prevent entry of the fungus into the tree. However, if cankers are less than 4-6 inches from the trunk the fungus has likely entered the main stem and pruning is futile. Missing a potentially lethal branch canker can negate the benefits of pruning, so care must be taken to remove all infected branches

White pine blister rust www.extension.umn.edu

GYPSY MOTH: The first aerial spray treatments of the season are planned for today, April 26 in Grant, Green, Iowa, Lafayette and Vernon counties. Spraying may be conducted throughout the weekend if activity is interrupted by rain, gusty winds or other adverse weather. Planes will be applying the biological insecticide, *Bacillus thuringiensis* var. *kurstaki* (Btk), which has been classified as acceptable for use in certified organic food production by the Organic Materials Review Institute. The treatment program's strategy is to eradicate isolated or low-level populations in western Wisconsin and delay spread of the gypsy moth into uninfested areas.

COOLEY SPRUCE GALL ADELGID: Overwintered immature females are active and should be noticeable on the undersides of Colorado blue spruce branches near the base of new swelling buds. The females develop rapidly in early spring, producing eggs that soon hatch into nymphs. Their feeding stimulates new shoots to elongate into the pinecone-shaped galls that encompass the entire shoot.

Control must occur before the females develop their white waxy coverings. The preferred treatment window is in early spring before new growth starts. The next treatment opportunity will be in fall, after the last generation of nymphs has settled onto the foliage of Douglas fir or into bark crevices of Colorado blue spruce.

Cooley spruce gall adelgid (gall) PG Dan flickr.com

CROWN RUST: The orange-yellow cluster cups that produce spores capable of infecting oats, rye and other grasses are appearing on buckthorn leaves in Dane County. Heavy amounts of rust inoculum on the buckthorn host may indicate greater rust potential for oats this year if proper conditions for infection should develop.

BALSAM TWIG APHID: Nursery inspectors report that the buds of balsam firs in Clark County are beginning to swell and break dormancy. The appearance of wingless female balsam twig aphids coincides with bud break, suggesting that the aphids will soon emerge and begin feeding on the buds. Controls must be initiated promptly in nurseries and Christmas tree plantings that had severe infestations of this pest last season.

APPLE INSECT & BLACK LIGHT TRAP COUNTS APRIL 19 - 25

COUNTY	SITE	STLM[1]	RBLR[2]	CM[3]	OBLR[4]	OBLR[5]	AM RED[6]	YELLOW[7]	GDD 50°F
Bayfield	Keystone	—	—	—	—				
Bayfield	Orienta	—	—	—	—				
Brown	Oneida	725	79	0	—				
Chippewa	Chippewa Falls	20	36	0	0				
Columbia	Rio	235	78	0	0				
Dane	Deerfield	42	0	0	—				
Dane	McFarland	85	2	0	—				
Dane	Mt. Horeb	46	165	0	—				
Dane	Stoughton	66	37	0	0				
Dane	West Madison	—	—	—	—				
Dodge	Brownsville	0	8	1	3				
Fond du Lac	Campbellsport	—	—	—	—				
Fond du Lac	Malone	10	8	0	0				
Fond du Lac	Rosendale	14	63	0	—				
Grant	Sinsinawa	0	0	1	—				
Green	Brodhead	15	29	0	4				
Iowa	Mineral Point	48	104	0	—				
Jackson	Hixton	86	39	0	—				
Kenosha	Burlington	100	20	0	—				
Marathon	Edgar	152	126	0	—				
Marinette	Niagara	0	2	—	0				
Marquette	Montello	54	3	0	0				
Ozaukee	Mequon	30	59	0	—				
Pierce	Beldenville	243	79	0	5				
Pierce	Spring Valley	71	180	0	0				
Polk	Turtle Lake	—	—	—	—				
Racine	Raymond	275	29	0	0				
Racine	Rochester	465	44	0	—				
Richland	Hillpoint	112	86	0	—				
Sheboygan	Plymouth	45	70	2	—				
Walworth	East Troy	15	1	0	—				
Walworth	Elkhorn	20	12	0	—				
Waukesha	New Berlin	70	2	0	0				

[1]Spotted tentiform leafminer; [2]Redbanded leafroller; [3]Codling moth; [4]Obliquebanded leafroller EASTERN; [5]Obliquebanded leafroller WESTERN; [6]Apple maggot red ball; *Unbaited AM trap; **Baited AM trap; [7]Apple maggot yellow board.

COUNTY	SITE	ECB[1]	TA[2]	BCW[3]	SCW[4]	DCW[5]	CE[6]	CEL[7]	WBC[8]	FORL[9]	VCW[10]
Chippewa	Chippewa Falls										
Crawford	Prairie du Chien	0	0	0	0	0	0	0	0	0	0
Dane	Mazomanie	0	2	2	0	0	0	0	0	0	2
Manitowoc	Manitowoc										
Marathon	Wausau										
Monroe	Sparta										
Rock	Janesville	0	41	1	0	0	0	19	0	0	4
Walworth	East Troy	0	7	0	0	0	0	1	0	1	0
Vernon	Coon Valley	0	3	0	0	0	0	0	0	0	0

[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.