Wisconsin Pest Bulletin

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Wisconsin Department of Agriculture, Trade & Consumer Protection

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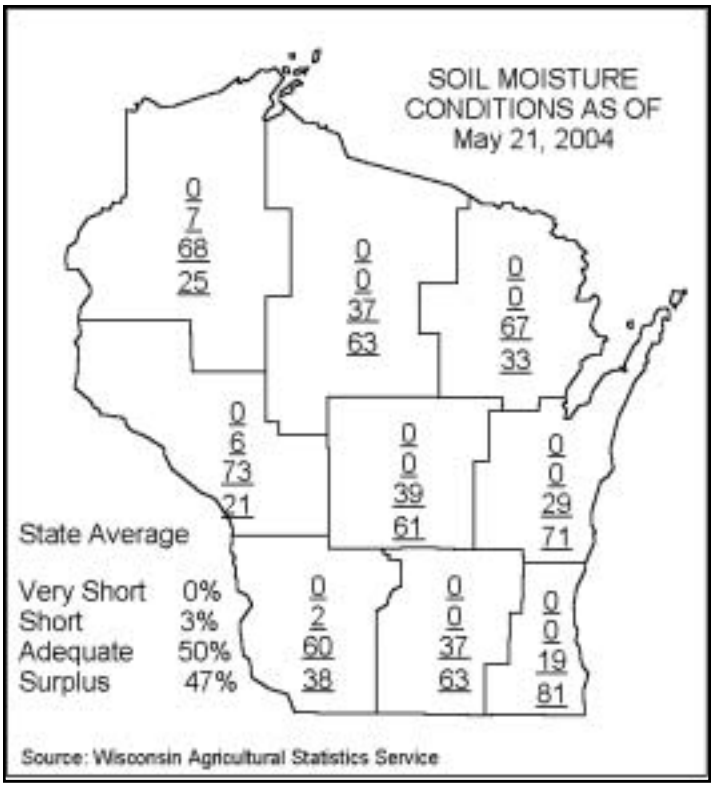
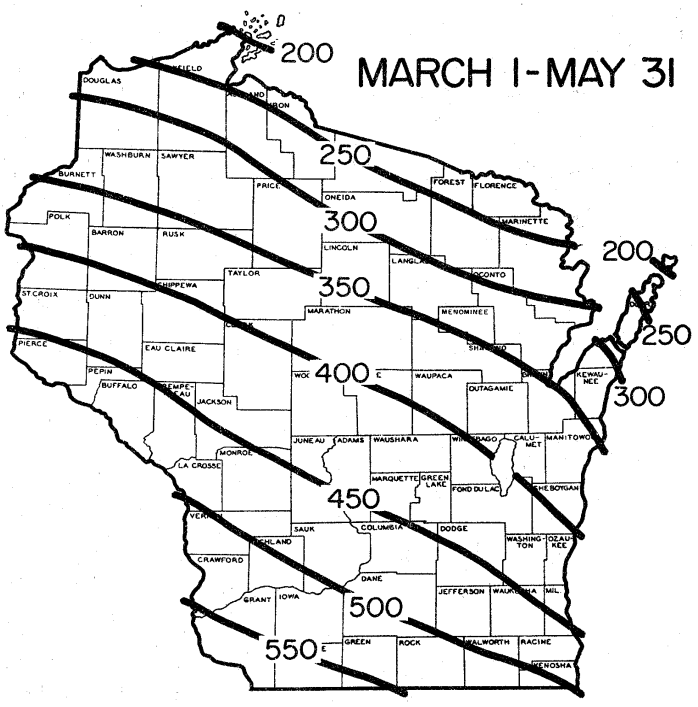




Historical Average Growing Degree-Days Accumulated Since March 1.

Weather and Pests

May has emerged as one of the wettest in recent memory. Consecutive days of heavy rainfall have left corn fields across the state looking more like ponds than fields. An estimated 5%-10% of Dane Co. fields will need to be replanted due to flooding, and the percentage is likely higher in southeastern counties. Several days of high temperatures and dry weather will be necessary for soil to dry enough for fieldwork to resume. The rainfall also prevented alfalfa from being harvested, and as a result,

GROWING DEGREE DAYS FROM MARCH 1 - MAY 27

Site	GDD*	2003 GDD	Base 48	Base 40
SOUTHWEST				**ss**
Dubuque, IA	529	454	545	1020
Lone Rock	484	450	494	954
SOUTHCENTRAL				
Beloit	519	440	531	995
Madison	446	408	460	908
Sullivan	475	396	485	937
Juneau	437	371	449	891
SOUTHEAST				
Waukesha	439	340	453	894
Hartford	407	334	420	849
Racine	392	286	405	821
Milwaukee	369	286	379	783
EAST CENTRAL				
Appleton	289	334	302	677
Green Bay	254	264	259	619
CENTRAL				
Big Flats	392	417	393	814
Hancock	362	403	361	768
Port Edwards	339	378	331	720
WEST CENTRAL				
LaCrosse	481	446	482	951
Eau Claire	361	442	353	755
NORTHWEST				
Cumberland	261	382	233	579
Bayfield	392	244	393	393
NORTH CENTRAL				
Wausau	280	335	264	610
Medford	252	325	235	654
NORTHEAST				
Crivitz	209	258	203	520
Crandon	232	287	211	524

*GDD above base 50 with 86 deg. upper limit

fields were exposed to heavy alfalfa weevil feeding for a prolonged period of time. Nearly all of the south central and southeast fields surveyed this week showed at least 50% tip feeding, while most are in the 70%-80% range. Injury to second crop regrowth is highly probable.

Alerts

Bean leaf beetle – Based on preliminary spring survey results, it appears that a relatively high number of adults survived the winter months. Pest survey staff continued to find beetles in Green, Lafayette, ,Dane, Jefferson, Kenosha, Racine, Walworth, and Waukesha Co. fields surveyed this week at the rate of 1-7 per 100 sweeps. Early planted soybean fields will be highly attractive to these overwintered bean leaf beetles. Growers are strongly urged to scout fields closely for bean leaf beetle activity as soybeans begin to emerge in the weeks ahead.

Alfalfa weevil – Outbreak conditions exist in many southern Wisconsin fields. High populations and heavy tip feeding damage were apparent in Jefferson, Walworth, Racine and Kenosha Co. fields. Numbers of weevils are far higher this season than in recent years.

Looking ahead

A brief forecast of pest-related events growers can anticipate in the upcoming week

Potato leafhopper – No reproduction was noted this week, but nymphs could be visible by next week. Growers can expect counts of leafhoppers to escalate very soon.

European corn borer – Moths of the first flight were detected in the margins of weedy alfalfa fields this week, indicating that the emergence of adults is in progress. Black light trappers are likely to see corn borer moths in the week ahead. Egg laying is expected to commence next week.

Corn

Armyworm – Continue to scout for armyworms feeding in small grain fields and corn fields in the week ahead.

Kenosha County corn field

While moth catches have not been alarmingly high, a steady amount of armyworm activity has been noted thus far this season. Reports from Illinois suggest armyworms have already become an issue for many growers there. In some Illinois fields, as many as 95% of the flag leaves had been devoured, and 10-12 armyworm larvae per foot of row were observed. No infestations that high have been observed in Wisconsin fields, but it serves as a good reminder to us all, not to discount the potential of this pest. Injury to corn and small grains is likely to grow increasingly noticeable in the weeks ahead, as armyworm larvae continue to develop and grow larger in size.

Black cutworm – Emerging corn fields (that aren't submerged beneath several inches of water) are currently at risk for cutworm injury. Black cutworm is generally most problematic in corn fields during the 10-14 days following emergence. Continue to scout for injury to corn in the week ahead and anticipate the most damage between 562-640 DD (base 50°F).

Black Cutworm Trap Counts

5/21/04- 5/27/04

County	City	Count
Rock	Beloit	3
Rock	Newark	1
Rock	Avon	1
Green	Juda	1
Green	Monroe	2
Green	Cadiz Springs	2
Lafayette	Gratiot	5
Lafayette	Shullsburg	0
Lafayette	Lead Mine	1
Grant	Hazel Green	0
Grant	Sinsinawa	2
Grant	Dickeyville	0
Grant	Lancaster	0
Grant	Cuba City	5

Black cutworm and damage

European corn borer – Both male and female moths were common in Jefferson and Walworth Co. fields this week. The peak of the first moth flight is expected at 631 DD (base 50F), which may occur in the south by the first week of June, if warm conditions persist.

ECB female

Forages

Alfalfa weevil – Recent consistent rainfall prevented farmers from harvesting fields, and left alfalfa stands exposed to heavy alfalfa weevil feeding pressure for a prolonged period of time. As a result, substantial infestations are now common throughout southern Wisconsin. Surveys in the southeast revealed very high numbers of larvae and adults this week, as well as high percentages of tip injury. Kenosha, Racine, Jefferson, Walworth, Green, Iowa, Dane and Lafayette averaged counts from 0.2-19 larvae per sweep, while tip feeding injury averaged 70% in many fields. Larvae were in all stages of development, but the more advanced 3rd instar larvae were most numerous. Pupae were observed in some Walworth Co. fields.


Alfalfa weevil tip injury

Krista Lambrecht

Growers are encouraged to examine their fields, determine the percentage of tip damage, and take necessary action. The longer harvesting of the first crops is delayed, the greater the likelihood of economic losses. Further, it appears that injury to second growth hay is highly likely. Scouting procedures, treatment thresholds and insecticide recommendations can be found in the University of Wisconsin-Extension bulletin number A3646 "Field Crop Pest Management in Wisconsin" which is available from your local county extension office. Also visit the WI-MN Cooperative Extension Agricultural Weather Page for information on alfalfa weevil at http://www.soils.wisc.edu/wimnext/alfalfa/alfweevil.html


Alfalfa weevil larvae collected in 50 sweeps in a Jefferson Co. field

Krista Lambrecht

Potato leafhopper – Populations of adults are not particularly high just yet. It appears that the recent rainfall may have temporarily slowed reproduction. Counts are currently running about 0.5 per sweep throughout the southern tier of counties, but growers can expect activity to pick up as soon as weather becomes more favorable. Injury to second growth alfalfa is a distinct possibility.

Potato Leafhopper Sweep Counts

Height of Alfalfa (inches)	Number per Sweep (adults & nymphs)
<3	0.2
3-6	0.5
6-12	1
12-14	2

Pea aphid – Winged specimens were prevalent in all alfalfa fields surveyed this week. Counts in the southeast (Jefferson, Kenosha, Racine, Walworth, and Waukesha) were relatively high, ranging from 9-44 per sweep. Braconid wasps, a common parasite of pea aphids, were also observed in most of the fields surveyed. Unfortunately, they don't seem to be making a dent in aphid numbers. Pea fields should be monitored closely in the next week or two as winged pea aphids begin to migrate from alfalfa fields.

Meadow spittlebug – Nymphs in Jefferson, Walworth and Waukesha Cos. are nearly full grown, indicating that adults will soon be present. Once the nymphs are done feeding, most likely within the next two-three weeks, we won't have to worry about this pest for the remainder of the season. Adults will continue to be present in all


Meadow spittlebug

Krista Lambrecht

alfalfa fields through fall, but the adults are not economically important. There is only one generation of meadow spittlebugs per year in Wisconsin. Counts this week were as high as 7 per 10 stems.

Plant bugs – Adults averaged 4 per sweep this week and young nymphs were noted in every field surveyed. Plant bugs are a common and often abundant alfalfa pest, but they seldom reach economically important levels in Wisconsin. The threshold in alfalfa 3" or shorter is 3/sweep, and increases to 5/sweep in alfalfa that is taller

than 3".

Soybeans

Bean leaf beetle – As soybeans begin to emerge in upcoming weeks, overwintered adults will seek out these fields for egg laying. These spring beetles are the same ones that were present last fall; they are the second generation of beetles from last season. Because bean leaf beetles seek sources of food early in the spring, the earlier that soybeans are planted, the greater the likelihood of economic infestations. Early planted fields will be especially attractive to bean leaf beetles and could sustain severe defoliation. Based on preliminary spring survey results, it appears that a relatively high number of adults survived the 2003-2004 winter here in Wisconsin. Pest survey staff continued to find beetles in many Green, Lafayette, Iowa, Dane, Jefferson, Kenosha, Racine, Walworth, and Waukesha Co. fields surveyed this week.

Economic damage to seedlings requires a fairly large number of beetles; however, only a few beetles are required to spread bean pod mottle virus from plant to plant. Growers are strongly encouraged to scout emerging soybean fields for bean leaf beetles and defoliation. During the early seedling stage the threshold for bean leaf beetles is 16 per foot of row. At V2+ the threshold increases to 39 per foot of row. Counting the number of beetles per plant works just as well as counting the number per foot of row, and some scouts may even find it to be an easier method. Scouts should also look for early feeding scars on cotyledons and shot holes in unifoliate and trifoliate leaves. Guidelines from Iowa State University suggest 2.0 to 4.4 beetles per plant at growth stage VC, 3.1 to 6.8 beetles per plant at growth stage V1, and 4.9 to 10.7 beetles per plant at growth stage V2. Iowa State's economic threshold table is available at http://www.ipm.iastate.edu/ipm/icm/2003/4-28-2003/blbmanagement.html.

Vegetables

Late blight of potato -- Spring rains are supposed to bring flowers, not concerns about late blight. However, we are accumulating severity values much faster than I would like to see at this point in the growing season. We base our blight warnings and spray initiation on the accumulation of 18 severity values since crop emergence. Weather stations are now in place at Grand Marsh, Hancock, Plover and Antigo. We have enough data from the Hancock site to calculate Severity Values and will soon have at least 7 days of data for all sites. As of 5/25/04 at the Hancock site for potatoes planted on April 14 and emerging May 12 there are 17 severity values. For potatoes planted on April 21 and emerging May 17, there are 11 severity values. For potatoes planted on April 28 and emerging May 22, there are 7 severity values. This should be cause for concern. While there was no late blight identified in Wisconsin during 2003, late blight was found in at least two states selling seed potatoes into our state. With this potential source of inoculum and ideal weather conditions during the past two weeks, there is good reason to think about several steps you can take to prevent an early season outbreak of late blight.

1) Check your farm to make sure that all chips and debris from your seed cutting operation are fed to livestock or buried to insure that this material does not become a source of late blight inoculum. Even the smallest pile of chips, if contaminated with an infected chip, can produce an incredible amount of inoculum. Strategically placed, this inoculum can lead to an early season epidemic, something we don't want to happen.

2) Check your farm and adjoining fields for remnants of cull potatoes or potatoes discarded due to poor markets. There has been and likely will be substantial amounts of potatoes without a home. Spreading them on farmland where they can't be killed or sprayed with fungicide is inviting a real problem later in the year. All cull piles need to be properly disposed of before May 20 according to WDATCP Rules. Disposal of large amounts of tubers is going to be difficult, but growers are urged to use their best judgement to avoid creating a much worse problem that will haunt us through the current growing and storage seasons.

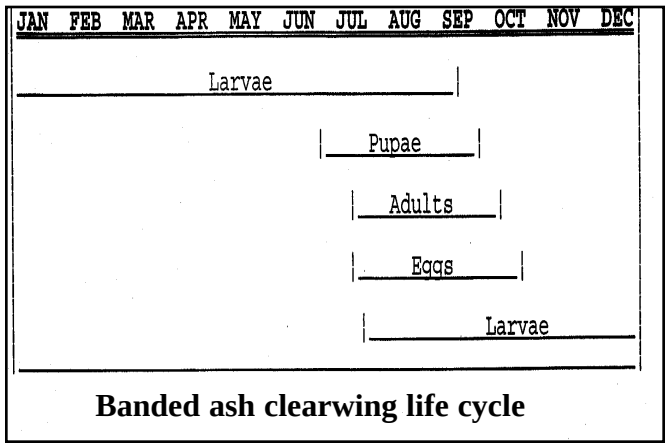
3) Consider applying a precautionary spray with a low label rate of protectant fungicide. There are many alternative materials that can be used, but the point is to get some protection on the foliage of the older plantings. We will likely hit 18 severity values on these older fields in the next few days, so this seems like a wise precaution.

4) Initiate scouting of production fields as soon as the crop emerges. Missing plants, sprouts that begin to emerge buts die back and girdled sprouts with a fuzzy growth near brown lesions should be checked for the presence of the late blight pathogen. Suspect samples can be submitted to our Disease Diagnostic Lab in the Plant Pathology Department, UW-Madison. Let's hope that we don't need that service in the near term.

You can keep tabs on severity value and P-Day accumulation at our four sites at the following web address:
http://www.plantpath.wisc.edu/wivegdis/index.htm
We'll have the site started after 5/27/04.
—Walt Stevenson, UWEX

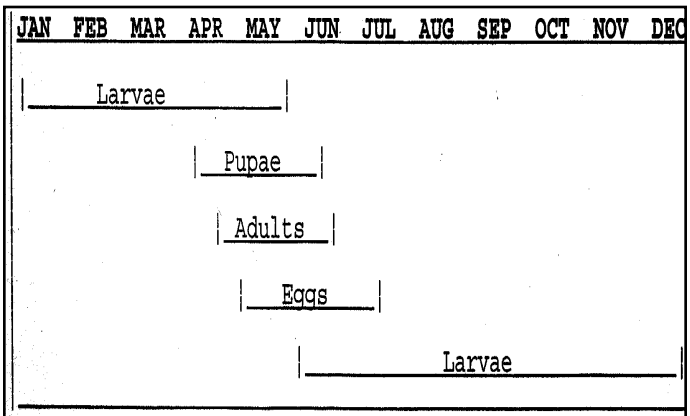
Forest, Shade Trees, Ornamentals and Turf

Ash borers – Two species of wood-boring moths affect ash trees in Wisconsin, the ash/lilac borer (*Podesia syringae*) and the banded ash clearwing (*Podesia aureocincta*). The ash/lilac borer is more common than the banded ash clearwing and is often more likely the culprit in ash damage. The two species cause similar damage but the temporal occurrence of egg-laying adults



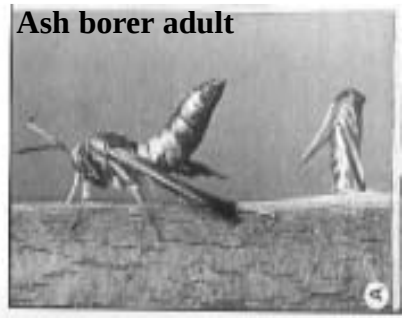
Banded ash clearwing life cycle

is quite different. The ash/lilac borer attacks ash (*Fraxinus*) and lilac (*Syringa*) as well as mountain-ash, privet, olive and fringetree. Banded ash clearwing attacks only *Fraxinus*. Ash/lilac borer overwinters as a nearly mature larva in the trunk or branches of an ash tree. Adults emerge from May through July in the northern states and lay eggs in bark crevices during their

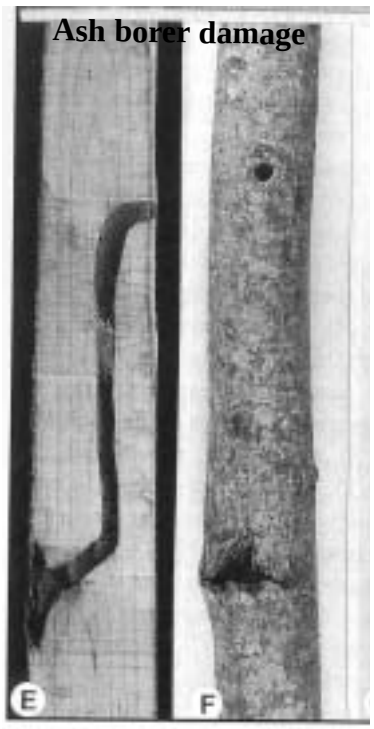


Ash/lilac borer life cycle

short adult life, about 5 or 6 days. Hatching larvae feed in the cambial region of the tree initially and then tunnel through the wood making a vertical gallery for a distance of 7 to 32 cm (see photo). The first sign of an infestation is sap mixed with frass oozing from bark on the trunk and/or larger branches during spring and summer. Later small clumps of frass are extruded from the tree and accumulate in crevices or the base of the tree. In contrast, banded ash clearwing emerges as an adult in August or September and lays its eggs soon after. The banded ash clearwing overwinters as a second instar larva in the tree. Oozing sap and frass are evident in late summer and fall in contrast to the ash/lilac borer. These different adult activity periods determine when control actions should be initiated. Insecticide applications are directed at egg-laying adults and newly hatched larvae. Since attack from both insects can occur on trunks up to large branches, sprays should be applied up to the first set of branches. For ornamental trees you can wrap the trunks with burlap before adults start to emerge. A pheromone for the ash/lilac borer is available which will also pick up the banded ash clearwing. This is a good way to tell which species you are dealing with.



Ash borer adult



Ash borer damage

These two borers should not be confused with the Emerald Ash Borer. Emerald ash borer, to date, has not been found in Wisconsin. EAB is a beetle and thus as an adult, would look much different than the two borers described above (see picture comparison). Emerald ash borer larvae tunnel in the phloem of tree cutting off the flow of nutrients to other parts of the tree. Trees attacked by EAB may die within three or four years whereas trees attacked by ash/lilac borer or banded ash clearwing may live for much longer. For more information on EAB see these websites:

http://www.na.fs.fed.us/spfo/eab/
http://www.emeraldashborer.info/
http://www.msue.msu.edu/reg_se/roberts/ash/
http://www.invasivespecies.gov/profiles/eab.shtml
http://www.ceris.purdue.edu/napis/pests/eab/
http://www.inspection.gc.ca/english/plaveg/protect/pestrava/ashfre/agrplae.shtml

Jack-in-the-pulpit rust – Rust caused by *Uromyces aritriphylli* was found on Jack-in-the-pulpit at a nursery dealer in St. Croix Co. The fungus persists systemically in the rootstock of infected plants and can reinfect the leaves each year. The fungus also can infect various

parts of the flower and may invade the ovule or young embryo, suggesting it may also be transmitted by seed.

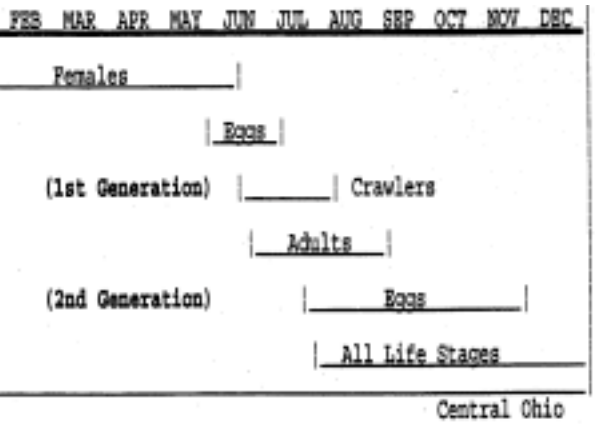
Black spot – This rose disease is really starting to increase throughout the state. This week it was found on various rose species and cultivars at nursery dealers in Fond du Lac, Green Lake, Kenosha, Lacrosse, Ozaukee, Sauk and St. Croix Cos. Infections ranged from light to moderate throughout holding areas. Avoid overhead watering, clean up fallen leaves and use protective fungicides if necessary.

Botrytis – Various annuals were seen with this disease at nursery dealers in Fond du Lac, Marquette, Ozaukee and Sauk Cos. Generally, light infections were noticed in hoop houses where poor air circulation favored disease development. Picking off fallen petals on plants can also help reduce this disease.

Shot hole disease – This disease, usually caused by one of several fungi, has been rather noticeable this season. Moderate amounts were seen on various Prunus spp. at nursery dealers in Fond du Lac, Green, Green Lake and Ozaukee Cos. Round leaf spots eventually dry out and the tissue falls out of the leaf leaving small holes all over the leaf. The appearance is as if someone fired a shotgun at the leaf. When the disease has progressed to this stage it is very difficult to find the causal organism. Management practices include avoiding overhead irrigation and removing and destroying fallen leaves. Chemical control may be used if the identity of the primary problem is known.

Virus – An unidentified virus on peonies was discovered at a nursery dealer in St. Croix Co. Mosaic and ringspot symptoms were observed on the foliage. The plant was sent to Agdia for an ornamental virus screen.

Winged euonymus scale – Several dwarf burning bush were found infested with this insect pest at nursery dealer locations in Price and St. Croix Cos. Winged euonymus scale resembles oystershell scale in shape but is much smaller, 1 to 2 mm. It is difficult to see with the naked eye and blends in well with the corky bark of burning bush, its primary host. Euonymus alatus 'compacta' is much more commonly infested than standard burning bush varieties. It was first identified in the U.S. in Ohio around 1950. It has also been reported from Florida, Illinois, Iowa, Maryland, Michigan, Oklahoma, Pennsylvania, Tennessee and West Virginia. Winter mortality is a major factor in reducing populations of this insect. Early fall coloration is one indicator of winged euonymus scale infestations. When examining burning bush a hand lens is a must as the scales can be confused with bumps and ridges on the plant. The scales are found on the stems and twigs anywhere on the plant. Control of this insect can be difficult because by mid-summer all life stages are present up until frost. Inspectors in Ohio reported good control with dormant oils applied during March or April there. Two fall oil sprays, two to three weeks apart also worked. The best way to avoid infestations is to take cuttings from clean stock plants. If only a few plants are infested, destroying those plants will reduce the possibility of a larger infestation.



Winged euonymus scale life cycle

Mountain ash sawfly – Small larvae were observed on mountain ash at a nursery dealer in Kenosha Co. Larvae at this stage are easy to control. Remember, though, Btk is not effective against sawflies, which are actually related to bees and wasps.

State/Federal Programs

Gypsy moth quarantine and how it affects your industry -- This is the final part of a four part series on gypsy moth quarantines in Wisconsin and how it affects our industries. This section will cover the recreational industry.

Tourism is a large and vital part of Wisconsin's economic picture. Gypsy moth can play a major roll in the success of recreational businesses in the state. Gypsy moth in large numbers can make camping conditions unbearable due to the lack of foliage on trees and the droppings they leave behind.

Any outside item that can be picked up and moved is regulated for gypsy moth. Because the females lay their eggs on just about anything, there is an increased risk of


Egg mass search on camper

moving the eggs to new locations in our travels. It is not uncommon to find egg masses on cars, trailers, campers and firewood. When traveling from a quarantined county in Wisconsin to a non-quarantined county you are

Egg mass search on trailer hitch

obligated under the law to make sure all your outside gear is free of gypsy moth. These regulations fall on the individuals that are recreating but it is in the best interest of the facility operators to ensure that their guests are not leaving any gypsy moth behind. When trees are defoliated campers do not want to stay. When caterpillars are crawling on everything and relieving themselves on you and your meals it can be a bit unappealing. The caterpillars can also cause skin rashes and excellerate respiratory problems in asthmatics. With a little knowledge and diligence we can all ensure that we are not moving this dangerous insect to new locations.

For more information on what you can do to help slow the spread of gypsy moth in Wisconsin and the US call 1-800-674-MOTH.

Gypsy moth trapping - All trappers have been trained to set gypsy moth traps in their respective counties. As of May 25th, over 1000 traps have been set. The first official report will be in next week's Pest Bulletin. Trappers have a picture I.D. card, wear an orange or green safety vest and have vehicle placards identifying their car/truck as part of our program. Trappers cannot start work before 6:00 a.m. or work after 6:00p.m. They do not work on weekends. Trappers are instructed to get permission to set traps on private property or leave a "notice" about the trap if no one is home. We appreciate landowner permission in allowing our trappers to set traps on private property. Most of our traps are set along the right-of-way of the road, but some are set off the road as part of our more intense delimitation trapping.

If you have any questions about the GYPSY MOTH PROGRAM, please call our hotline at 1-800-642-MOTH or visit our website at: http://www.datcp.state.wi.us/arm/environment/insects/gypsy-moth/

Fruit

ATTENTION APPLE COOPERATORS – Your weekly apple insect traps counts are now posted on the DATCP website, along with a map showing the location of your orchard. To access your counts go to the following site, http://www.datcp.state.wi.us/index.jsp, scroll down to the Popular Topics heading, and click on Apple Insect Trapping Data. Unfortunately some of our newest 2004 cooperators are not included this year, but we will be sure to get your site posted next season.

Apple scab ascospore modeling network — All of the orchards in the DATCP ascospore modeling network are showing at least 90% spore maturity, very near the end of the season for primary spore development. Assuming good control of apple scab during this period (an assumption that may have been difficult to fulfill, given the abundant wet weather in the past several weeks), secondary scab infection should be minimal for the rest of the season. However, because of the difficulty of maintaining good scab control while dodging thunderstorms, growers should continue to monitor their orchards for new lesions.

Information on the apple scab network is available at http://www.datcp.state.wi.us/arm/agriculture/crops/applescab/applescab.html/

Our thanks to the cooperators for their efforts.

Calendar of Events

June 26 – 27th, 2004 Wisconsin Berry Growers Association Strawberry Festival
8am - 3pm both days, (farm opens for U-Pick at 7am)
FREE ADMISSION
Kirschbaum's Strawberry Acres, N5802 Hwy 151, Beaver Dam, Wisconsin

June 23 MOSES Organic Basics Training. "Organic Apple Production". Keith Kozub Farm, River Falls, WI. 10 am- 3 pm. $15 fee (includes lunch and materials). For more information and to register, contact Deirdre Birmingham at deirdreb@mindspring.com or 608-873-8224.

July 12 MOSES Organic Basics Training. "Organic Vegetable and Flower Production". East Troy, WI at the Michael Fields Agricultural Institute. 9am-2:30 pm. $10 fee for noon meal. For more information and to register, contact Jody at jody@mosesorganic.org or 715-667-3203.

July 13 Potato Field Day, Hancock Agricultural Research Station. For more info, call (715) 249-5961.

July 15 CSA Vegetables Field Day. North Creek Community Farm, Prairie Farm, WI. Contact Karen Stettler, 507/523-3366 stettler@landstewardshipproject.org

July 15 Wisconsin Arborists Association Summer Workshop. Janesville, WI at Rotary Gardens. Contact Dave Graham (608)756-5561 or email dwgco@tcon.net

Apple Insect Trapping Results

	Date	STLM	RBLR	CM	OBLR
Crawford Co.					
Gays Mills-E2	5/21-5/27	10	2	13	0
Grant Co.					
Cuba City	5/21-5/27	3	4	1	0
Sinsinawa	5/21-5/27	1	2	3	0
Iowa Co.					
Dodgeville	5/21-5/27	15	4	17	2
Richland Co.					
Hillpoint	5/19-5/26	55	1	0	5
Richland Center -W	5/21-5/27	42	7	1	0
Richland Center-E	5/21-5/27	18	11	1	0
Sauk Co.					
Baraboo	5/21-5/27	80	26	14	0
Dane Co.					
Deerfield	5/18-5/25	5	0	3	1
Madison	5/19-5/27	0	0	4	0
Green Co.					
Brodhead	5/21-5/27	0	0	0	1
Kenosha Co.					
Burlington	5/21-5/27	22	2	1	0
Ozaukee Co.					
Mequon	5/18-5/24	35	1	1.3	0
Racine Co.					
Franksville	5/21-5/27	8	1	0	0
Rochester	5/21-5/27	0	1	2.8	0
Waukesha Co.					
New Berlin	5/21-5/27	6	0	6	1
Jackson Co.					
Hixton	5/21-5/27	35	3	1	1
Pierce Co.					
Spring Valley	5/21-5/27	35	2	0	0
Marquette Co					
Montello	5/16-5/23	84	0	0	2
Brown Co.					
Oneida	5/17-5/24	120	15	1	0
Fond du Lac Co.					
Malone	5/21-5/27	13	6	0	0
Trempealeau					
Galesville	5/21-5/27	20	0	2	0
Sheboygan Co.					
Plymouth	5/21-5/27	24	7	1	9
Marinette Co.					
Wausaukee	5/21-5/27	8	0	0	0

STLM--Spotted tentiform leaf miner; RBLR--Redbanded leaf roller;CM--Codling moth;OBLR--Oblique banded leaf roller

Department of Agriculture,
Trade & Consumer Protection
Division of Agricultural Resources Management
PO Box 8911
Madison WI 53708-8911

http://www.soils.wisc.edu/wimnext/tree/arbor.html

Web Site of the Week

Apple Journal

http://www.applejournal.com

From the orchard to the kitchen...your resource for everything apple.

Quote of the Week

“Don’t knock the weather; nine tenths of the people couldn’t start a conversation if it didn’t change once in awhile.”

-Kin Hubbard 1868-1930