

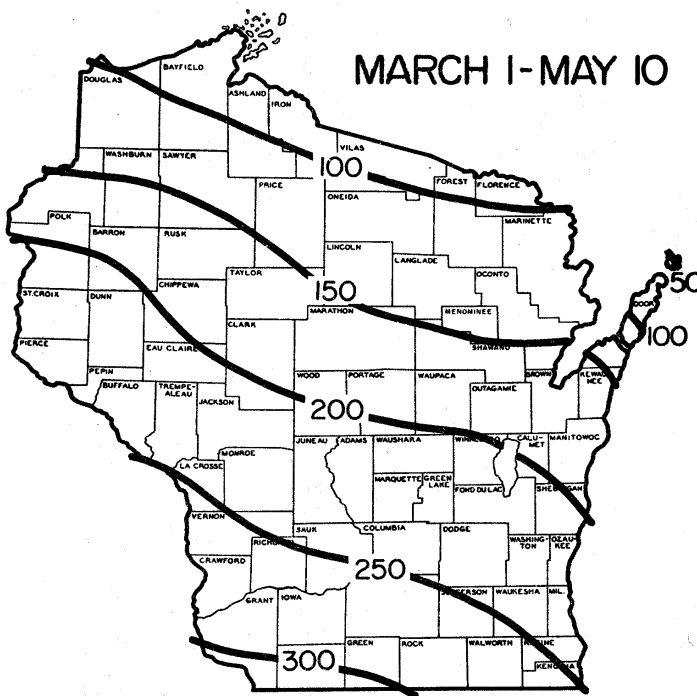
Weather and Pests

The weather during the last week continued to be somewhat erratic. Daytime temperatures were more moderate than the previous week, but evening temperatures remained cool. Spring tillage and planting continued, despite the inconsistent mixture of rain, shine and even snow. Corn planting is slightly behind schedule, delayed in some parts of the state by cool soil conditions, while oats are ahead of schedule and reportedly looking very good. Soybean planting is just beginning to get underway in the south.

Growing degree days from March 1 through May 6

Site	2003 GDD*	Norm GDD	Base 48	Base 40	
SOUTHWEST					
Dubuque, IA	287	290	265	278	598
Lone Rock	265	276	222	255	561
SOUTHCENTRAL					
Beloit	274	278	245	265	576
Madison	238	245	226	233	530
Sullivan	248	243	212	240	540
Juneau	229	218	190	223	514
SOUTHEAST					
Waukesha	227	207	208	221	509
Hartford	211	195	188	206	484
Racine	207	175	205	200	465
Milwaukee	196	169	198	188	443
EAST CENTRAL					
Appleton	156	175	NA	147	376
Green Bay	131	130	138	123	338
CENTRAL					
Big Flats	210	243	171	198	473
Hancock	189	230	NA	177	439
Port Edwards	174	209	164	157	406
WEST CENTRAL					
LaCrosse	276	260	200	257	577
Eau Claire	198	236	165	180	438
NORTHWEST					
Cumberland	138	195	142	112	328
Bayfield	66	97	51	49	212
NORTH CENTRAL					
Wausau	138	175	135	119	329
Medford	122	168	126	104	300
NORTHEAST					
Crivitz	100	116	NA	88	270
Crandon	114	137	NA	96	282

*GDD above base 50, with 86 deg. upper limit.



Historical Average Growing Degree-Days Accumulated Since March 1. (Wisconsin Agricultural Statistics Service)

Pest insect development continued at a normal pace. First instar alfalfa weevil larvae were common in southeastern alfalfa fields this week. Few larvae were observed, but adults were abundant and spring-laid eggs are beginning to hatch. More black cutworms are arriving by the day, but the significant flight of moths anticipated in the very near future has not yet occurred. Pheromone traps near Dickeyville and Cadiz Springs had the highest black cutworm moth counts this week.

Alerts

Giant African Land Snails (GALS) – Here at the Wisconsin Department of Agriculture we've grown accustomed to dealing with exotic species. In fact, in recent years exotic pest detection has become a large part of our job description. In weekly issues of the Wisconsin Pest Bulletin we frequently report on exotic species like the gypsy moth, soybean aphid and pine shoot beetle. And while we are in the habit of detecting and managing conventional exotic agricultural pests, we seldom encounter an exotic species so conspicuous and so potentially problematic as giant African land snails, or as we like to refer to them, GALS.

Giant African Land Snail



GALS are large, terrestrial snails of African origin that cause extensive damage to plants in tropical and subtropical agricultural systems and the environment. With a host range of more than 500 plants and growing up to 8 inches length, these are not your average snails. Besides being comparatively large, GALS may also carry serious human diseases, including *Angiostrongylus cantonensis* and, potentially, *A. costaricensis*. These diseases can be contracted by ingesting improperly cooked snail meat, or by handling live snails and transferring the snail mucus to human mucus membranes (eyes, nose, and mouth). In the United States, GALS are only known to be established in Hawaii, and the importation or possession of GALS is a violation of plant quarantine regulations.

In the fall of 2003 it came to our attention that Giant African Land Snails (GALS) were being sold in pet

stores in the east central region of the state. The Wisconsin Department of Agriculture, working in conjunction with USDA APHIS and PPQ, canvassed Wisconsin to determine the extent to which this pest might be present. Until last week, the scope of the problem appeared limited to a few key areas of the state; however, following a recent press release, it became apparent that the magnitude of the GALS problem is far larger than anyone initially suspected. In the last week we have received more than 90 GALS-related phone calls and obtained nearly 300 adult snails and over 650 eggs that were voluntarily surrendered by owners. This was in addition to 172 previously seized adult specimens and more than 1000 eggs found as a result of earlier inspections of commercial pet stores, swaps and private breeders in the State. We found that numerous residents throughout Wisconsin have been keeping GALS as pets for more than a year.

Fortunately, no GALS have been found in Wisconsin outside of captivity. At the same time, there is a concern that the wider presence of GALS in the pet trade and in schools may lead to the eventual establishment of the snails as an unwanted plant pest. If the presence of GALS becomes more widespread, this may result in releases or escapes from captivity leading to the establishment of a new, potentially devastating plant pest. Giant African Land Snails are prohibited in the U.S., and it is illegal to sell, own or possess them. If you have GALS or know anyone who has GALS you are encouraged to report to the Pest Survey Line 1-800-462-2803.

Looking Ahead

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

Alfalfa weevil – Eggs laid this spring are beginning to hatch. Egg laying should increase greatly in the next few weeks. Adults are active and growing abundant in some southern fields.

Black cutworm – In areas where cultivation and planting are delayed, and weather conditions favor the growth of grasses, scattered black cutworm problems are likely to arise. Northern growers subject to these conditions should pay particularly close attention to



black cutworm activity early this season.

European corn borer – Overwintered larvae are entering the pupal stage in regions where 246 DD (base 50°F) have accumulated. The first moths could appear in black light traps next week in some advanced southern areas, or once 347 DD are reached.

Codling moth – The first flight of moths is beginning in the south, as DD approach 201-340 DD (base 50°F). Moths were reported from Sinsinawa, Burlington, Rochester, New Berlin, Franksville and Deerfield this week. Look for counts to increase in the week ahead. As codling moths begin appearing in pheromone traps, cooperators should monitor closely for the first sustained flight of male moths. Control treatments are most effective when applied 250 DD (base 50°F) after the “biofix”, or cumulative capture occurs.

Meadow spittlebug – A single tiny nymph was observed in a northeastern Walworth Co. alfalfa fields this week and it is likely that egg hatch is occurring at many southern localities. In the next week or two look for spittle masses to become evident in forage crops and roadside grasses.

Spotted tentiform leafminer – The first peak flight of moths has occurred throughout much of the south and the first larvae are expected this week, 209-231 DD base 50°F. The first leaf mines of the season are anticipated around 329-403 DD. Southern Wisconsin apple growers should scout for sap-feeder mines in the week ahead and during the following week. Remember, STLM control decisions should be made based on the abundance of leaf mines, not the number of moths per trap. Scouting is imperative.

Gypsy moth – Eggs were reported to have begun hatching in the Brookfield area on Monday, May 3.

Aster leafhopper – Sweep net searches in southeastern Wisconsin winter grain fields earlier this week found two migrants.

Pine needle scale – Egg hatch should occur soon, just as lilac is in ½ full flower.

Ash plant bug – Emergence is underway--see **Forest** section for more information.

Corn

Black cutworm – Where cool, wet conditions favor the growth of grasses, delaying tillage and herbicide applications, black cutworm infestations are likely to develop. All grassy fields should be considered potential sites for black cutworm problems. Egg laying is underway in the south (175-255 DD Base 50F), and larval hatch is right around the corner. As corn seedlings begin to emerge in the weeks ahead it will be critical to

scout for black cutworm injury.

2004 Black Cutworm Weekly Trap Counts			
Site	County	City	
1	Rock	Beloit	1
2	Rock	Newark	0
3	Rock	Avon	2
4	Green	Juda	3
5	Green	Monroe	3
6	Green	Cadiz Springs	4
7	Lafayette	Gratiot	0
8	Lafayette	Shullsburg	0
9	Lafayette	Lead Mine	0
10	Grant	Hazel Green	3
11	Grant	Sinsinawa	0
12	Grant	Dickeyville	5
13	Grant	Cuba City	0
14	Grant	Lancaster	1

Lancaster black light trap – Caught 2 black cutworms, 10 cabbage loopers, and at least 1 armyworm this week.

Seedcorn maggot – Where cool nights and rainy conditions persist, damage to susceptible crops such as beans, corn and cucurbits could be observed. These weather conditions sometimes delay seed germination and prolong adult emergence, making conditions right for damage to occur.

Small Grains

Insect activity in the few small grains fields surveyed this week was minimal. No English grain aphids were observed; however, these migrants are expected to reach Wisconsin soon.

Aster leafhopper – The first migrants of the season were swept from a Walworth Co. winter wheat field, presumably blown in on southerly winds. Only 2 adults were swept in 25 sweeps; nonetheless, their presence suggests that more leafhoppers are on the way. The primary source of Wisconsin’s aster leafhopper population is the spring migration of adults from the southern United States. We also have a native population that overwinters in the egg stage, but it is generally only a minor source contributing to the overall seasonal



population. Aster leafhoppers are a regular problem for Midwestern carrot growers because they vector aster yellows, a phytoplasma. Following the arrival of the migratory adults, the native population begins hatching from eggs laid last fall in winter wheat and other grasses. In addition to carrots, other susceptible vegetable hosts include: lettuce, celery, carrots, and parsnip.

Forages

Pea aphid – Little change in the aphid population was noted this week. Adults continue to be detected at low rates in the southern Cos. Sweep net counts in Rock, Jefferson and Walworth Cos. did not exceed 0.7aphids/sweep.



Alfalfa weevil – Alfalfa weevil is a springtime pest which resumes activity just a bit

earlier than many other agricultural pest insects. After temperatures began to exceed 48°F, larvae started to develop within the eggs and adults recommenced mating and laying eggs. Larvae begin hatching from overwintering eggs once 200 DD (above a base temperature of 48°F) have accumulated. Now that alfalfa weevils are active and development is underway, scouting should start (250-300 DD); in the southeastern, southwestern, and parts of the south central and west central agricultural districts, that's now! Expect an early peak of third instar larvae from overwintering eggs to occur after an accumulation of 325 DD; and a second major peak of third instar larvae from spring eggs after an accumulation of 575 DD.

UW-Extension recommends the following when scouting for alfalfa weevil: Spot-check sandy knolls or fields with south facing slopes and look for tiny pin-holes in the upper leaves. Unfold newly emerged leaves and look for larvae. Spot checking will help determine when to start detailed scouting of all fields. To make a detailed evaluation of first crop weevil damage, walk an M-shaped pattern and collect 50 stems at random. When finished, carefully look over each stem for signs of weevil feeding. Count all stems that show signs of feeding and divide that number by 50 (total number of stems initially collected) to determine percentage tip feeding. Control is suggested when 40% or more of the stems show signs of weevil feeding.

Visit the WI-MN Cooperative Extension Agricultural Weather Page on the Web to see a colored map showing

alfalfa weevil degree day accumulations in Wisconsin (<http://www.soils.wisc.edu/wimnext/alfalfa/alfweevil.html>).

Alfalfa Weevil Event	DD (base 48F)	Location	DD through May 6
Egg hatch	300	Madison	233
1st – 2nd instar	301 - 438	Milwaukee	188
3rd – 4th instar	439 - 595	Racine	200
Pupa - Adult	596 – 810	Green Bay	123
		LaCrosse	259
		Hancock	177
		Wausau	119

Tarnished plant bug – Low populations of adult tarnished plant bugs can be found in most alfalfa fields. Sweep net counts did not exceed 4 adults per 25 sweeps.

Vegetables

Cabbage Maggot -- Flies typically emerge in early May, after overwintering in the soil as pupae. First generation cabbage maggot eggs are laid when lilac is in full bloom. Cabbage maggots are a familiar pest to cabbage growers, but will attack the roots of any cole crop, opening the pathway for diseases such as soft rot or black leg. The cabbage maggot fly is often mistaken for the housefly but is half as long with black stripes on its thorax. One method of monitoring to determine when peak emergence takes place, though it is somewhat labor intensive, is by placing yellow dish pans filled with soapy water at 100 foot intervals along field edges. Record the number of flies in the pans every 4-6 days to determine if the fly population is increasing or decreasing. Then, avoid planting transplants and seedlings when the population is peaking. Maggots can be especially damaging to seedlings. Examine the roots of stunted and off-color seedlings to confirm cabbage maggot presence. For more information at treatment, see UW-Extension publication A3422 Commercial Vegetable Production in Wisconsin 2004.

Cabbage Maggot Event	Degree Days (base 43)
1st generation adults	300
2nd generation adults	1476
3rd generation adults	2652
Location	Cabbage maggot GDD (through May 6)
Racine	300
La Crosse	379
Portage	281
Madison	352

Potato cull piles - A reminder that potato cull piles must be disposed of by May 20 using the options listed in ATCP 21.15 Wis. Adm. Code: 1) feed to livestock so that they are completely consumed; 2) spread on fields and incorporated into the soil; 3) deposit the cull potatoes in a licensed landfill with the written permission of the

landfill operator; 4) another method which the Department of Agriculture, Trade and Consumer Protection approves in writing. The purpose of the cull pile regulation is to prevent volunteer potato plants from serving as a source of late blight inoculum. For more information, please contact Sara Ott at (715) 345-5349 or sara.ott@datcp.state.wi.us.

Apiary

Honey bee winter mortality – Beekeeper reports at Wisconsin Honey Producers Association meetings indicate an average winter kill of 39% during the winter of 2003/2004. In Southern Wisconsin, mortality was lower (32%) than in northern Wisconsin where 53% of hives succumbed. Beekeepers reporting manage an average of 25 hives.

Fruits

Pests to monitor at petal fall - Petal fall is a critical time for the diverse range of pests affecting apples. These include direct pests such as plum curculio, redbanded leafroller, obliquebanded leafroller, and San Jose scale, as well as indirect pests such as European red mite, and spotted tentiform leafminer. A spray program initiated at petal fall should control ERM, STLM, PC, RBLR and OBLR. While the right combination of sprays should serve to reduce pest problems, it is equally critical to scout both before and after spraying, to best time applications and to assess the efficacy of the spray. Scouting is hard work, but an essential part of an effective IPM program.

Spotted tentiform leafminer – As trap counts increase in the week ahead, apple growers may feel compelled to spray, in an effort to control what appears to be high levels of STLM in the orchard. Spraying based solely on pheromone trap catches is not advised. Pheromone counts are not infallibly indicative of the STLM population in an orchard. Pheromone traps do, however, indicate when to begin scouting for leaf mines, and control decisions should be based on the number of leaf mines per leaf.

Codling moth - The first generation flight of codling moth usually starts around full bloom. Ten adults were caught between 4/17 and 4/25 at an orchard near Rochester in Racine Co. Moths are also showing up in pheromone traps throughout the south and in Dane Co. The biofix (continuous flight) has occurred at several southern sites and should soon occur in parts of the west central and central districts.

As you know, pheromone traps are a highly useful tool for monitoring populations of adult male codling moths. Trapping helps to establish the biofix, a mandatory part of improving the efficacy of CM control. When

warranted, the first insecticide application should be timed about 250 degree-days (base 50°) after the beginning of biofix. A second application, only if absolutely necessary, can be applied about two to three weeks later. As an alternative to conventional insecticides, mating disruption may be a valuable alternative in orchards under low pressure from this pest insect.

Obliquebanded leafroller (OBLR) - The first summer generation moths are expected to emerge near the end of May and early June, and will be active for approximately four to six weeks. A single OBLR female is capable of depositing up to nine hundred eggs during the oviposition period. Look for an increased number of OBLR to appear in pheromone traps soon.

Using a base of 43 degrees F, degree-days (DD) 43 for obliquebanded leafroller activity are:

600 DD	first adult emergence
800 DD	first eggs laid
1,150 DD	peak adult emergence
1,250 DD	peak egg laying
2,050 DD	first emergence of 2nd-generation adults
2,300 DD	first eggs laid by 2nd generation adults

Obliquebanded leafroller



Biofix side note –A biofix is an observable event, such as the capture of insects in a pheromone trap, that signals when to start counting degree days. For the biofix to be established for codling moth, it is necessary to have at least two or more consecutive nights of moth captures. Once the biofix is determined, the cumulative degree days should be calculated. For codling moth, a precise relationship exists between the number of accumulated degree days after biofix and the percentage of eggs hatched.

Use of Cougarblight in Michigan for fire blight management --Cougarblight is a model for fire blight developed over the past 13 years by Tim Smith of Washington State University. Over the years, Michigan growers have used the Maryblyt™ model developed by Dr. Paul Steiner at the University of Maryland almost exclusively for timing fire blight sprays – however, there is always interest in possible better ways to manage this

sometimes devastating disease.

Cougarblight was developed in the Pacific Northwest, so the use of it in Michigan must be considered experimental under Michigan conditions. The model uses air temperature, leaf wetness, rainfall and fire blight history to determine a risk index for each day during bloom.

The theory behind the Cougarblight model is that the blight bacteria can thrive only about four days on each individual flower. The fire blight bacteria must develop to dangerous numbers during the immediate three or four days leading up to blossom wetting. It is interesting to note that the Maryblyt™ model has somewhat the same feature – a degree day model using a base of 40°F is used to track blossom longevity. For apples, any blossom older than 80 GDD40 is considered over the hill. This is approximately four days at an average daily temperature of 60°F.

Like the Maryblyt™ model, the Cougarblight model is used to predict blossom infection. The model initiates at first bloom and ends at the end of bloom. The model uses hourly temperature to calculate the degree hour accumulation for each day using a base of 60°F (Maryblyt™ uses a 65°F base). Cougarblight calculates a four-day running sum of degree hours as an indicator of potential blight bacteria growth on opened flowers. At the beginning of bloom, the sum will be for fewer days, as the flowers were not open for colonization yet. Low risk is assumed for any day with no rain and with less than three hours of wet leaves.

A prominent feature in Cougarblight is the use of previous fire blight history information to help determine the risk due to infection (Table 1). The idea is that the potential for fire blight infection is greater for sites having a recent history of the disease. This is a feature missing in the Maryblyt™ model, although the microcomputer version of this program allows the user to adjust thresholds of several variables.

According to Smith, spray controls are often necessary while risk of infection is near or above the “High” threshold and blossom wetting is likely, or has happened within the past few hours. Sprays are most effective if applied prior to blossom wetting, especially during “extreme risk” temperature conditions. Antibiotic sprays are less effective when applied after an infection period, but are very beneficial for about the first 12 hours post infection, beneficial if applied within 12 to 24 hours after infection and may be of some effect during the 24 to 48 hour post infection period.

One of the greatest differences between the Cougarblight model and the Maryblyt™ model is in how the two handle wetting information (Table 2). Although the

temperature may be high, the Cougarblight model will predict only low risk on a given day if there is no precipitation or at least three hours of leaf wetness. The Maryblyt™ model can give a risk index up to high (numerical index 3) even with no precipitation or leaf wetness in a given day. However, experienced users of the Cougarblight model will know that a high heat unit accumulation plus wetting equals a high-risk situation. Both models, especially Maryblyt™, are complex and require thought by the crop manager to use them wisely in guiding control decisions.

The Maryblyt™ model has not been updated for newer computer operating systems and is no longer available for purchase. With the availability of these two models on web sites (see references at end of article), it is becoming easier for crop managers to make comparisons. For Michigan growers, the Michigan State University Integrated Crop Management web site (<http://scud.geo.msu.edu/>) will provide them way to look at both models using Michigan automatic weather station data. According to Tim Smith the Cougarblight model is currently undergoing revision.

References

Smith T. J., 1996. A risk assessment model for fire blight of apple and pear. *Acta Hort.* 411:97-100.

<http://scud.geo.msu.edu/> Note: This is an experimental web site maintained by Michigan State University with both Cougarblight and a near-replica of Maryblyt.

<http://www.mifruit.com/> Note: This is Michigan web site with current Maryblyt based decision charts for Michigan automatic weather station data.

<http://www.ncw.wsu.edu/FB2000f.htm> Note: This is a web site maintained by Tim Smith with detailed information about Cougarblight.

<http://www.nysaes.cornell.edu/pp/extension/ffabp/cougarbl.shtml> Note: Cornell University maintains a web page with Cougarblight predictions for production areas in New York.

<http://www.msue.msu.edu/vanburen/fblinks.htm> Note: Mark Longstroth, district fruit agent for Michigan State University, maintains a web site with fire blight information, including past epidemics in Michigan.

(Bill Shane, District Fruit Agent, Michigan State University Extension. Reprinted from May 4, 2004 MSU Fruit CAT, http://www.ipm.msu.edu/CAT04_frt/F05-04-04.htm

Apple Scab — Low temperatures last Monday morning may have caused considerable damage to apple flowers around the state. Temperatures dipped into the low 20s in several cooperator orchards. Information on critical orchard temperatures is available in a chart on page 9.

Cold weather aside, ascospore development continues with the warm days. The development model indicates spore maturity ranging from 72% at Prairie du Chien (5/3 data) to 38% mature at Plymouth (5/7 data). The period from 5% maturity to the first spore release after 95% maturity is considered to constitute the primary scab season, which provides the initial inoculum for the entire season's scab infection. Current information on the apple scab maturity network is always available at <http://www.datcp.state.wi.us/arm/agriculture/crops/apple/scab/applescab.html/>

Forest, Shade Trees, Ornamentals and Turf

Ash plant bug – This pest of ash trees, and particularly green ash, hatches from eggs embedded in the bark of the tree in spring when bud break is occurring. There are usually two generations per year. The young, greenish



nymphs feed on the undersides of the leaves causing a stippling to the leaves. Nymphs pass through five instars in about 25 days before becoming adults. At high populations, leaves become distorted and necrotic areas form along the margins. Early leaf drop may occur if plant bug populations are high. Black dots on the underside of the leaves are from fecal matter generated by the feeding insects. To scout for ash plant bug look for whitish or yellowish mottling of the leaves. Check the undersides of leaves on several trees to look for the red and black nymphs. Control measures should be aimed at the newly hatching nymphs in the spring.



Control treatments should begin as Magnolia x soulangiana, saucer magnolia, is in full to late bloom (100-200 DD base 50°F). Repeat applications may be necessary.

Eastern Tent Caterpillar - Waupaca Co (27 Apr), Jackson and LaCrosse Cos (4 May), and Adams Co (6 May) on understory and roadside wild cherries. Tents are approximately golf ball size and the caterpillars are approximately 1/2" long.

Pine Bark Beetles and Clerid Beetles - Sauk Co (28 Apr), Pine Bark Beetles were flying and attacking red pine. Clerid Beetles (predator of Pine Bark Beetles) were crawling around on and mating on red pine.

White Pine Blister Rust - LaCrosse Co (4 May), cankers on white pine are producing aecial spores.



Gall Rust on Pines (Eastern and Pine-Pine) - Adams Co (6 May), galls on Jack pine are producing aecial spores.

Rust – Widespread, heavy infections of rust were observed on hollyhocks ‘Peaches ‘n cream’ and ‘Summer memory’ at a nursery dealer in Calumet Co. This rust, *Puccinia malvacearum* was first described in Chile in 1852 where it is thought to have originated. It was found in the North America in 1886 and is now found throughout the world. This species attacks over 40 species in the Malvaceae and appears to have no specialization on the different hosts. Control with a registered fungicide once infections are first observed. New foliage needs to have protective fungicides applied to keep from getting this disease.

Spirea leaf spot – Light infections of this leaf spot fungus were found on ‘Anthony waterer’ spirea at a nursery dealer in Calumet Co. This fungus appears as small, reddish spots on the leaves. The spots enlarge and may coalesce, eventually causing early leaf drop. Chemical control is usually not warranted. Cultural practices and sanitation are very important in managing this disease. Avoid overhead irrigation, if possible, and

clean up fallen leaves as the fungus overwinters in them.

Rhizosphaera needle cast – Colorado spruce at a nursery dealer in Sawyer Co. had a moderate amount of this needle-infecting fungus. Infections generally occur in the spring during rainy periods. Symptoms are noticeable in late summer as yellow mottling. During late winter and early spring the needles turn purplish and eventually drop in the summer and fall. Protection with fungicides is an option.



State/Federal Programs

GYPSY MOTH PROGRAM - Trapper training will take place the week of May 17th in Madison and Hayward. Part of the training will include training on Magellan 315 GPS units. These units are used to mark the location of every trap set. There will be approximately 32,000 trap set this year in Wisconsin. Trap locations are pre-numbered from the database and are not randomly assigned. Trappers are instructed to set the trap within one-half mile of the predetermined location. Once the trapper selects a tree and sets the trap, he/she writes a written description of the trap's location and marks the location using the GPS unit. Using GPS units allow us to make maps directly from computer files, greatly speeding up the mapping process.

Most traps are set along the right-of-way of roads but in some cases trappers need to go on private property. Trappers are instructed to ask for permission to set the trap or leave a notice at the landowners home with information about where the trap was set. If landowners object to having the trap on their property or want it moved, they can call the GYPSY MOTH HOTLINE to request it to be removed or taken down. We appreciate landowner cooperation in allowing this program to set traps on private property.

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/>

Odds -n- Ends

Email notification and web publication—chasing ephemera In response to financial pressures in the last state budget cycle, the WI Pest Bulletin became primarily a web-based publication. Several years into the experiment, we're still learning how to distribute an electronic publication in ways that meets the needs of our subscribers. We've had some success—the numbers of subscribers to the electronic notification continues to increase, and by season's end we hope to reach the level of subscribers we had back when the Bulletin came free on yellow paper.

We've also had some frustrations. Every issue, a fair section of our email list bounces. We keep names on the list if the error message we get indicates a full mailbox or gives no specific reason for the refusal, but we cull names if they come back twice with 'user unknown' or the like. However, we fear that we may be losing valid subscribers through technological glitches. So please, if you stop hearing from us (though we know that listening for silence requires a Zen-like attitude), let us know.

The other frustration is the format. The Pest Bulletin has never really become a web-based publication; it's a paper format displayed on a screen. Until we can find a way to produce a web-friendly document in as timely a fashion as making a PDF, we're likely to remain based on a 5000 year old format. In the meantime, we hope the PDF format works for those of you printing the Bulletin out.

In order to better define the needs of our readers, we're planning an on-line survey later in the season. We'll do our best to avoid inflicting popups on you, but we do hope that when you have the opportunity, you'll help us produce a better Pest Bulletin. In the meantime, your comments and suggestions are always welcome at bulletin@datcp.state.wi.us

Calendar of Events

Wisconsin Berry Growers Association Strawberry Festival

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

The UWEX Master Gardener Program offers many educational opportunities and workshops. For information on offerings in your area, visit www.hort.wisc.edu/mastergardener/

Have an item you'd like us to list in the calendar? Email event particulars to bulletin@datcp.state.wi.us

Apple Insect Trapping Results through May 6,2004

	Date	STLM	RBLR	CM	OBLR	PC
Grant Co.						
Cuba City	4/29-5/6	45	124			
Sinsinawa	4/29-5/6	7	3	1		
Iowa Co.						
Dodgeville	4/29-5/6	420	68	0		
Richland Co.						
Hillpoint	4/19-4/27	280	49	0		
Dane Co.						
Deerfield	4/27-5/4	490	11	1	1	
Madison	4/29-5/6	0	35	0		
Dodge Co.						
Brownsville	4/28-5/6	12	14			
Kenosha Co.						
Burlington	4/29-5/7	1000	24	3	5	
Ozaukee Co.						
Mequon	4/27-5/3	225	14	0		
Racine Co.						
Franksville	4/29-5/6	475	38	2		
Rochester	4/20-5/7	935	26	5		
Waukesha Co.						
New Berlin	4/29-5/6	20	3	3		
Jackson Co.						
Hixton	4/27-5/3	12	2	0		
Pierce Co.						
Spring Valley	4/30-5/7	482	42	0	0	
Marquette Co						
Montello	4/25-5/2	335	6	0	0	
Brown Co.						
Oneida	4/25-5/2	500	23	0	0	
Fond du Lac Co.						
Campbellsport	5/2-5/5	125			1	
Malone	4/29-5/6	50	15	0	0	
	4/22-4/29	30	17			
Sheboygan Co.						
Plymouth	4/29-5/7	550	43			
Marinette Co.						
Wausaukee	4/29-5/6	0	2	0	0	0

STLM--Spotted tentiform leaf miner; RBLR--Redbanded leaf roller;CM--Codling moth;OBLR--Oblique banded leaf roller
AM--Apple maggot, PC --Plum Curculio

CRITICAL SPRING TEMPERATURES FOR FRUIT BUD DEVELOPMENT STAGES

Apple	Silvertip	Green Tip	½ inchgreen	TightCluster	FirstPink	FullPink	FirstBloom	Full Bloom	Post Bloom
Old temp*	16	16	22	27	27	28	28	29	29
10% kill	15	18	23	27	28	28	28	28	28
90% kill	2	10	15	21	24	25	25	25	25

*Old temp is the lowest temperature in Deg. F. that can be endured for 30 minutes.

(from <http://www.msue.msu.edu/vanburen/crtmptxt.htm>)



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

Web Site of the Week

North American Guideline's for Children's Agricultural Tasks

<http://www.nagcat.org/categories.htm>

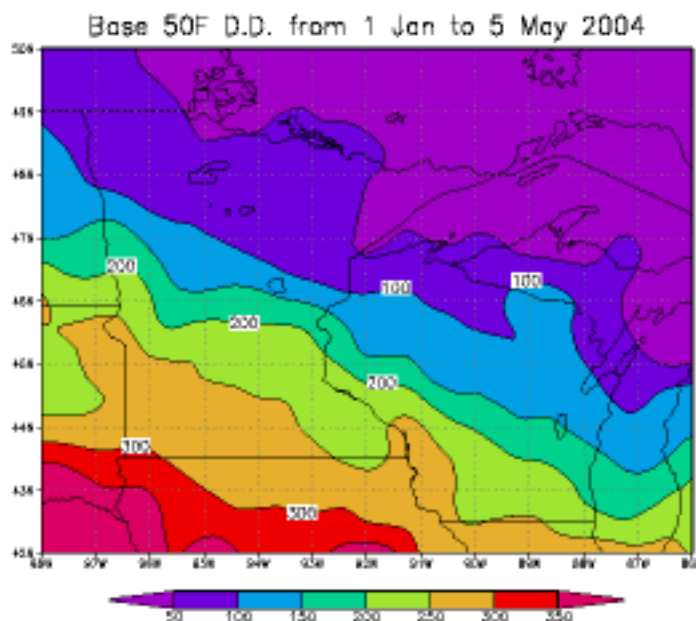
Provides guidelines to help parents determine what tasks a child can perform safely. Animal care, tractors, implements, and other farm chores are discussed.

Quote of the Week

"In the fissures of rocks and the hollows of trees diligent and clever bees established their colonies, freely offering to any hand the fertile harvest of their sweet labor."

Miguel de Cervantes (1547-1616), *Don Quixote*
(Edith Grossman, trans.)

May 7, 2004



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