

Weather and Pests

Milder weather and rainshowers this week gave a boost to emerging corn; the clean, uniform rows of corn seedlings look like green stitching along the soils of the rolling hills of southern Wisconsin. Spring tillage is ahead of schedule and very near completion. Corn planting is progressing at a steady rate and should soon be finishing up in the south. While the rains were beneficial to crops, they kept field staff out of fields for a majority of the week, just as insect activity is picking up. In the forage and grain fields

Growing degree days from March 1 through May 13:

Site	GDD*	2003 GDD	Norm GDD	Base 48	Base 40
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SOUTHWEST

Dubuque, IA	388	321	327	391	767
Lone Rock	356	312	281	355	718

SOUTHCENTRAL

Beloit	382	310	294	384	750
Madison	327	278	281	332	683
Sullivan	349	274	262	351	706
Juneau	320	250	240	324	669

SOUTHEAST

Waukesha	321	234	260	325	668
Hartford	298	225	237	302	633
Racine	286	199	253	289	608
Milwaukee	271	194	244	271	579

EAST CENTRAL

Appleton	216	213	215	214	494
Green Bay	181	160	182	181	447

CENTRAL

Big Flats	284	284	230	278	606
Hancock	260	271	229	254	568
Port Edwards	241	250	221	231	529

WEST CENTRAL

LaCrosse	358	301	265	348	721
Eau Claire	267	282	218	254	563

NORTHWEST

Cumberland	195	244	195	170	432
Bayfield	97	134	78	76	282

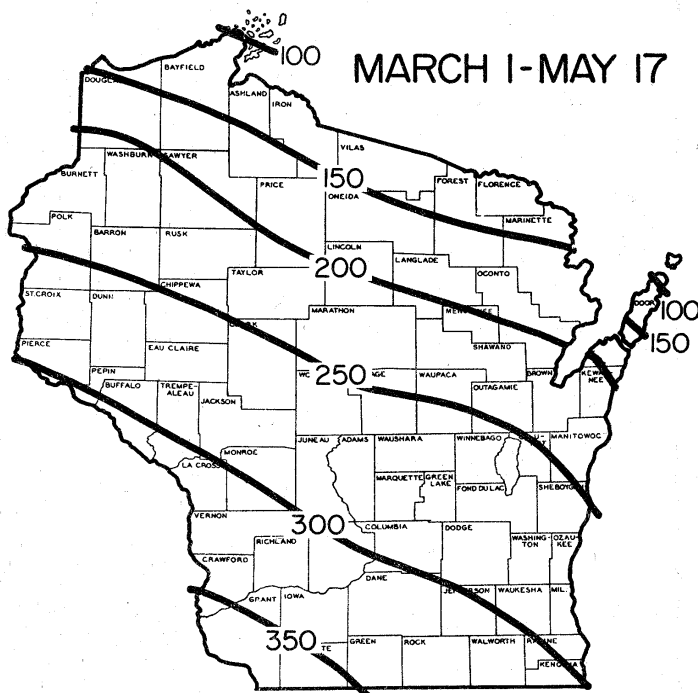
NORTH CENTRAL

Wausau	198	216	187	183	443
Medford	179	208	176	164	409

NORTHEAST

Crivitz	144	153	143	137	367
Crandon	167	179	135	151	386

GDD above base 50 with 86 deg. upper limit



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

surveyed, armyworms, weevils, spittlebugs and plant bugs were noticeably active.

Alerts

Giant African Land Snails (GALS) – A reminder that we strongly encourage people who have GALS as pets (see last issue) to call the DATCP’s Pest Survey Hotline at 1-800-462-2803, rather than destroying snails themselves. DATCP staff are looking for background information and hoping to trace the origin of GALS in Wisconsin. Though possession of the snails is illegal, no legal action will be taken against snail owners.

Eastern Subterranean Termites -- Detected in Manitowoc Co., the first record of this household pest from that county. The termite now has been reported from at least 19 counties in the state--more information at <http://www.entomology.wisc.edu/diaglab/labnotes/WItermite.pdf>. (Phil Pellitteri, UW Insect Diagnostics Lab)

Looking Ahead

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

Potato leafhopper – Migrants could arrive by next week. Last year the first potato leafhoppers of the season were detected in alfalfa fields on May 6 in Walworth Co.

Bean leaf beetle – Populations were surprisingly low last summer, but any winter survivors will begin emerging from overwintering sites next week. It’s not clear whether we will see heavy beetle populations this summer, as in 2002, or if levels will remain low; the latter seems more probable than the former.

Alfalfa weevil – Warmer temperatures in the southern counties have accelerated weevil activity. Mating and egg laying are likely to be intense in some fields.

Black cutworm – Larval hatch, an event forecast to begin around May 17 in the Madison area, is underway in the southern counties where 310 DD (base 50°F) have accumulated. With larval hatch and development ensuing, damage can’t be far behind.

Aster leafhopper – Migrants continue to arrive on southerly winds.

Cabbage maggot – Look for adults to begin emerging in southern counties.

European corn borer – Pupation is in full swing and the first moths of the season should begin appearing this week.

Spotted tentiform leafminer – Leaf mines should grow

noticeable this week. Scout for the earliest mines on the undersides of apple foliage, once 329-403 DD (base 50F) have accumulated.

Codling moth – First flight will begin in the central and east central districts where 201-340 DD have accumulated (base 50°F). Flight is already well underway throughout the south. Once moths begin to appear in pheromone traps, cooperators are encouraged to monitor closely for the biofix (cumulative capture).

Corn

Black cutworm – Conditions are right for heavy infestation to occur, especially in wet, weedy fields. Begin scouting closely for injury to seedling corn in the week ahead and expect to see the most damage between 562-640 DD (base 50°F), or the last week of May-first week of June.

Young black cutworm larvae feed near the soil surface, but as they develop and increase in size, they burrow deeper into the soil and cut plants below the soil surface. Plants cut above the growing point typically recover; however, plants severed below the growing point die. Late-planted crops are more susceptible than those planted earlier in the season. Below are some thresholds for black cutworms in vegetable crops:

- beans 2 larvae/foot of row
- potatoes 4 larvae/foot of row
- sweet corn >5% of plants damaged
- leafy greens >3% of stand affected

Corn is most susceptible to injury during the 10-14 days following emergence. Holes in leaves, wilted plants, and plants cut at ground level are all indicators of a black cutworm infestation. Weed control is an effective way to lessen the risk for black cutworm problems, but soil insecticides as a preventative practice are not recommended. When thresholds are exceeded, spot treatment may be beneficial. Consult UWEX publication A3422 for pesticide recommendations.

2004 Black Cutworm Trap Counts through 5-13-04			
Site	County	City	Count
1	Rock	Beloit	1
2	Rock	Newark	0
3	Rock	Avon	0
4	Green	Juda	1
5	Green	Monroe	1
6	Green	Cadiz Springs	4
7	Lafayette	Gratiot	0
8	Lafayette	Shullsburg	2
9	Lafayette	Lead Mine	1
10	Grant	Hazel Green	0
11	Grant	Sinsinawa	0
12	Grant	Dickeyville	0
13	Grant	Cuba City	0
14	Grant	Lancaster	0

European corn borer – The weather this past week facilitated corn planting in some localities. At the same time, pupation of corn borers is well underway. Pupation takes about ten days and the first moths should appear at 347 DD (base 50°F). In the southeast, parts of the southwest, and near LaCrosse, this stage has been surpassed. Moth flight typically peaks at 631 DD. Black light traps, scheduled to be installed next week, should detect the first emerging corn borers of the season. Based on the low fall population of corn borers, we expect the first flight of moths to be light.

Armyworm – An account from retired DATCP entomologist Lee Lovett stated, “an unusual number of armyworm moths over the last three weeks, but more so this week.” Lee reports having flushed out many moths while mowing his lawn. Several armyworm moths have also shown up at his porch light, and this serves as a reminder to all of us with an interest in insects to keep our porch lights on, as this is a good way, (believe it or not) to monitor insect presence in urban areas. Lee warns that with the recent rain and the rank growth of grass, armyworms might become an issue in some spots. Thanks to Lee for his first official report of the season! We look forward to his future porch light reports, entomological musings, and keen observations.

Forages

Alfalfa weevil – Larvae from overwintered eggs are slightly more abundant than last week, but average no more than eight per 25 sweeps in Rock, Green and Dane Co. fields. Feeding damage is visible yet insignificant. Adults appear fairly active and numbers generally average fewer than four per 25 sweeps. Under current weather conditions, female alfalfa weevils can lay anywhere from 60-70 eggs per night. At this pace, populations are likely to grow substantially in the next couple of weeks. Spring-laid eggs began hatching in the Madison area around May 9. Alfalfa weevil degree days are listed.

Potato leafhopper – No migrants were detected this week, but they are undoubtedly on the way. Mid-May is when we typically anticipate the arrival of potato leafhoppers. Begin scouting to detect the first adult of

Alfalfa Weevil GDD Through May 13 (Base 48F)	
Beloit	384
Madison	332
Waukesha	325
Racine	289
Green Bay	181
Appleton	214
LaCrosse	348
Eau Claire	254
Wausau	183
Hancock	254

the season in the upcoming week.

Meadow spittlebug – The first nymphs of the season were detected last week, and this week spittle masses were commonplace in southern Wisconsin hay and clover. Masses are still quite small, and nymphs are first or second instar. Numbers are generally low, with fewer than one or two nymphs per 10 stems common.

Pea aphid – Populations in southern Wisconsin alfalfa fields are low, ranging from 2-14 per 20 sweeps. No winged aphids were observed in the fields surveyed this week. Milder temperatures should facilitate the development of pea aphids in the week ahead. Look for populations to increase dramatically very soon.

Tarnished plant bug – Adults were noted in alfalfa fields again this week, but still no nymphs have been observed. Sweep nets counts of adults numbered fewer than six per 20 sweeps.

Vegetables

Black light trapping – A total of 80 armyworm moths, 5 celery loopers and 1 bilobed looper were captured in the Lancaster black light trap this week. At the West Madison trap, 19 armyworms and 1 celery looper were captured. Armyworm counts rose substantially at both sites since last week.

Aster leafhopper – The first migrants of the 2004 growing season were found in winter wheat last week, and counts have changed little in the meantime. Fields surveyed in Green and Rock Cos. had counts of 2-5 leafhoppers per 25 sweeps. As of yesterday, sweeping has not turned up any nymphs, but with temperatures increasing, development will speed up, especially as eggs begin hatching in the week or two ahead.

Cabbage maggot – Cool, wet springs promote conditions that contribute to heavy infestations of cabbage maggot. Fields of cruciferous vegetables should be scouted closely for signs of cabbage maggot activity after adults begin emerging. Adults begin laying eggs on the soil close to transplants about a week after emergence. Eggs hatch in 3-7 days and larvae feed on plant roots for 3-4 weeks before pupating in the soil. A total of 1180 DD (base 43°F) are required to complete the first generation. The second generation appears in mid-summer, and it is the second generation adults that lay third generation eggs that develop into the overwintering pupae in the fall.

Asparagus beetle – Adult activity was noted in Dane Co., near Stoughton, during the last week.

Flea beetles – Look for this common pest to appear soon, where it has not already. In Wisconsin flea beetles overwinter as adults, in protective grasses and weeds and

beneath debris. With temperatures on the rise, flea beetle activity is very likely to pick up.

Forest, Shade Trees, Ornamentals and Turf

Phyllosticta leaf spot – Scattered rhododendron plants at a nursery dealer in Milwaukee Co. were diagnosed with phyllosticta leaf spot by the DATCP lab. The samples were taken as part of our effort to survey for **sudden oak death** at nursery dealers. Several species of *Phyllosticta* are found infecting rhododendrons and azaleas. Symptoms normally include marginal or terminal spots on the leaves. The upper leaf surface can look rough due to the spore-producing structures protruding through the epidermis. This fungal pathogen is easily controlled with registered fungicides.

Black spot – This fungal pathogen was found on various roses at nursery dealers in Dodge, Lafayette, Rock and Waukesha Cos. The fungus overwinters in fallen leaves or infected canes. Leaves that are still expanding are most susceptible. Seven hours of immersion in water is necessary for the fungus to germinate and cause infection. Symptoms appear three to sixteen days after germinating depending on temperature. Spores are

Cabbage Maggot Event	GDD (base 43F)	Location	GDD (thru May 6)
1st generation flies	300	Racine	422
2nd generation flies	1476	La Crosse	507
3rd generation flies	2652	Portage Madison	401 497

spread by splashing water, insects and people during plant maintenance. Survival of the fungus on tools may be less than a month. Sanitation is important in reducing overwintering inoculum. Fallen leaves should be raked up and disposed of in fall. Also, infected canes should be pruned out. Fungicide sprays may be necessary if weather conditions are favorable for disease development. Some varieties are more tolerant than others but because there are different pathogenic races complete resistance is rare.

Bronze birch borer – Cut leaf weeping birch at a nursery dealer in Rock Co. and white birch at a dealer in Fond du Lac Co. were found infested with this insect pest. Bronze birch borer attacks several species of birch including paper, gray, yellow and western paper birch. Bronze birch occurs from Newfoundland to British Columbia and south to Maine and Washington and in the central United States to Missouri. Depending on the area, bronze birch borer adults emerge from late May to August. The adults feed on foliage causing minimal damage and generally live about three weeks. Eggs are laid in crevices and hatch in about two weeks. Larvae tunnel into the cambium and occasionally wander into the xylem. Bronze birch borer has a one or two year life

cycle depending on emergence date, geographic location and other factors. Infested trees have noticeable swellings, bumps and D-shaped emergence holes. Insecticides can be used to protect valuable trees but proper siting of trees is much more important. Some resistant varieties are available but again siting is important. Make sure trees receive adequate watering to help keep trees healthy.

Gymnosporangium rust – Light amounts of rust were found on ‘Wichita’ blue juniper at a nursery dealer in Lafayette Co. The fungus was widespread and quite noticeable. Over the years we have seen this particular juniper as a very susceptible host for this rust. While damage on junipers is usually minimal, infection of its alternate, rosaceous host can cause premature defoliation if conditions are favorable. Most varieties of *Juniperus chinensis*, *J. horizontalis* and *J. sabina* are not very susceptible to this disease. Control of this disease on juniper is not warranted.

Tomato spotted wilt virus – This virus was diagnosed from lupine plants collected at a nursery dealer in Rock Co. Symptoms on lupine are shown in the photos below. Ringspots are frequently observed on infected plants, but other symptoms include stunting, wilting, basal rot, leaf distortion, and foliar necrosis. This virus has worldwide distribution and was first recognized in Australia sometime before 1930. It is known to be vectored by the western flower thrips but other thrips may also vector it. This virus is known to infect over 170 species of plants and attacks ornamental as well as food crops. It is often found infecting impatiens in greenhouses. Infected plants can show symptoms after only a few days. Nymphs of the western flower thrips acquire the disease after feeding on infected plants. The adult thrips transmits the virus to new plants. An integrated control program is needed to manage this disease. Detection and identification of the virus and the vector are essential. Plant shipments should be inspected on arrival for virus symptoms and/or thrips. Destroying infected plants reduces inoculum. Weeds can serve as reservoirs and should be controlled. Pet plants that stay in the greenhouse yearround should be avoided as they are another reservoir. Thrips can be monitored with sticky traps hung directly above foliage and checked on a regular basis. Repeated insecticide sprays may be needed to control thrips and rotation of insecticide classes is important to avoid resistance developing.

Chrysanthemum leaf miner – Moderate amounts of leaf mining was observed on mums at a nursery dealer in Fond du Lac Co. The adult is a small, grayish fly, about four mm in length, with a yellowish color on the sides of the abdomen. The eggs are laid directly into the leaf. The hatching larva makes a wandering tunnel between the leaf surfaces and pupates within the leaf. Each

generation generally takes a little over a month to complete.

Nectria canker – Some severely infected honeylocust trees were found at a nursery dealer in Juneau Co. This fungus can be spread by water, wind and pruning tools.

State/Federal Programs

The UW Plant Disease Diagnostics Clinic Joins the National Diagnostics Network --Brian Hudelson, UW-Madison/Extension Plant Disease Diagnostics Clinic

In wake of the events of September 11, 2001, as well as subsequent federal legislation known as the Agbioterrorism Act of 2002, efforts are underway to network the nation's land grant plant disease and insect diagnostic facilities under a model that would mimic the network that is currently available for detection and tracking of human diseases coordinated by the Center for Disease Control (CDC). The goals of the new National Plant Diagnostic Network (NPDN) are to link and foster communication between diagnostic clinics, and enhance their ability to quickly detect and respond to new and emerging agriculture plant pathogens that might be accidentally or intentionally introduced in the United States.

Diagnostic facilities in the NPDN are divided into five regions and the UW-Madison/Extension Plant Disease Diagnostics Clinic (PDDC) and Insect Diagnostic Lab are members of the north central region, also known as the North Central Plant Diagnostic Network (NCPDN). Efforts in this region are coordinated through Michigan State University. Current activities of the NCPDN include development of an informational website which can be accessed at www.ncpdn.org. This site provides general information for the public and professionals about the NCPDN, as well as alerts on current "hot" insect and disease pests. The NCPDN, in coordination with other regional PDN's is also developing a centralized database for tracking of samples from member diagnostic facilities. This website will eventually allow for easy consultations between member diagnosticians and will include an electronic photo database.

NPDN diagnosticians have already been instrumental in the detection of exotic pathogens. Members of the network were the initial detectors of *Ralstonia solanacearum* race 3 biovar 2, the bacterium that causes Ralstonia wilt (see University of Wisconsin Garden Facts X1011 at www.plantpath.wisc.edu/pddc). This bacterium was introduced into the United States on geraniums in 2003, and is of concern because it causes a serious disease of potatoes called brown rot. In addition, *Ralstonia solanacearum* race 3 biovar 2 is listed as a select agent in the Agbioterrorism Act of 2002, and is

considered a plant pathogen that might be weaponized by terrorists and deployed against US agriculture. Because of *Ralstonia's* select agent status, the detection of this bacterium in 2003 was considered a national security issue and led to a federal investigation that concluded that the bacterium was accidentally introduced.

NPDN diagnosticians are also participating in current efforts to monitor for the sudden oak death pathogen (*Phytophthora ramorum*), and the soybean rust pathogens (*Phakopsora pachyrhizi* and *Phakopsora meibomiaae*). None of these pathogens has yet to be reported in Wisconsin.

Plant care professionals who are interested in becoming more involved with the NCPDN, will eventually be eligible, through special training sessions, to become "first detectors". Training sessions are scheduled to begin in the winter of 2004/2005. First detectors will be allowed additional access to the NCPDN database so that they can report new and interesting diseases or insect pests that they come across during their day-to-day activities. For more information on the PDDC's participation the NCPDN and NPDN, as well as information on becoming a first detector, contact Brian Hudelson, Director of the PDDC, at (608) 262-2863 or bdh@plantpath.wisc.edu.

Gypsy moth quarantine and Christmas trees --

Christmas tree growers have a role in preventing the spread of gypsy moth. To aid in that effort, Christmas tree growers raising trees in a quarantined area of Wisconsin and shipped to a non-quarantined area outside of the state must have a gypsy moth compliance agreement with the USDA. If you are shipping out of a quarantined area to a non-quarantined area you also must receive a field inspection and obtain a plant health certificate from DATCP. If gypsy moth is found in or around a field, DATCP control guidelines must be followed before any tree can be harvested. Control measures may include pesticide treatment in a specific growth window. Because of the required timing of control efforts, we recommend that growers not wait until the year you plan to harvest to have a field inspected. Some states require plant health certificates for trees regardless of gypsy moth quarantine status, so growers who plan to ship out of state may want to request certificates. The certificate cost is \$50 and includes the inspection. A plant health certificate does not guarantee that your trees are free of gypsy moth and it is the grower's responsibility to make sure they are. The certificate indicates that during the inspection no gypsy moth was found. The inspection will also point out any insect and diseases that were also found in the field.

For information on USDA compliance agreements,

contact JoAnn Cruse, USDA State Plant Health Director at (608) 231-9553 or joann.m.cruse@aphis.usda.gov For information on DATCP licensing and inspections for Christmas trees, contact Konnie Jerabeck at (715) 822-3947 or konnie.jerabek@datcp.state.wi.us

Small Grains

English grain aphid – While no aphids were noted in the few grain fields surveyed this week, activity is probably escalating. Look for migrants to appear in southern grain fields soon. English grain aphid colonies often develop on leaves and then move to heads in the boot stage. Aphids may cluster about the bracts of wheat heads or other grains (see image below). The English grain aphid is a pest of concern because it vectors barley yellow dwarf virus, but it seldom reduces yield and generally does not require control. Further, the English grain aphid is vulnerable to many common aphid parasites and predators like lady beetles and lacewing larvae. The body of the English grain aphid is green, while both cornicles and legs are completely black.

Fruit

Spotted tentiform leafminer – Where 329 DD (base 50°F) have accumulated, such as in Dubuque, Lone Rock, Beloit, Madison and LaCrosse, the first leaf mines of the season should soon be visible. Look for leaf mines through 403 DD, and expect the 2nd flight of moths to begin around 539-750 DD. At the present rate of heat unit accumulation, the 2nd flight could occur as soon as May 26 near Beloit, May 29 near LaCrosse, by May 30 near Madison and by June 11 near Eau Claire. In the less advanced central and northern areas, the first larvae of the season should soon hatch (209 – 231DD base 50).

Codling moth – The first flight of moths is in progress throughout the south and mating and egg laying is also likely to be underway. Codling moth eggs begin to hatch around 491 DD (base 50°F). This could occur by June 1 near Racine, by May 26-27 near Madison and by May 25 near LaCrosse.

Plum curculio – No plum curculio weevils were trapped this week, but in areas where temperatures warmed up substantially, it is likely that adults are moving into orchards.

Apple scab - John Aue, Orchard IPM Specialist, reports the first lesions on both leaves and fruit this week, presumably from an infection period between April 2 to 25. He says apple scab has been his primary concern this season; reports from other cooperators are consistent with John's observation. With the many hours of leaf wetness that occurred this week, most orchards in the southern tier of counties probably had three or four infection periods between Sunday, May 9 and Thursday,

May 13. Where there are primary lesions, disease could spread rapidly in the week ahead.

Results from the DATCP apple scab spore maturity network are contained in the table. 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/applescab/applescab.html/>

Odds -n- Ends

Carpenter ants are beginning to swarm in Dane, Rock and Waukesha Cos.(Phil Pellitteri, UW Insect Diagnostics Lab)

Azalea sawflies have been reported in Dane Co. (UW IDL)

UW has received complaints about "piles" of **springtails** being found outside in Clark and Sauk Cos (UW IDL)

Black flies have started to emerge, but the cold weather is slowing them down for the moment. (Mark Kopecky, UWEX Price Co.)

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

Aug 9 Fruit, Vegetable and Flower Twilight Tour,
Hancock Ag Research Station, Hancock, WI. Hosted in
the Albert Horticultural Garden from 5:00 to 8:00 p.m.
Tour the station and research plots, and see more than
600 varieties of perennials, herbs, prairie plants, shade
plants, grapes and heirloom varieties. For more
information contact the Hancock Ag Research Station,
N3909 County Hwy V, Hancock, WI 54943-7547 at
(715) 249-5961 or fax (715) 249-5850.

Apple Insect Trapping Results (through May 13th)

	Date	STLM	RBLR	CM	OBLR	PC
Crawford Co.						
Gays Mills-E2	5/6-5/13	145	61	1		
Grant Co.						
Cuba City	5/7-5/13	50	42	14	15	
Iowa Co.						
Dodgeville	5/6-5/13	250	30			
Richland Co.						
Hillpoint	4/29-5/10	300	24	0		
Richland Center -W	5/6-5/13	125	26	0		
Richland Center-E	5/6-5/13	210	42	0		
Sauk Co.						
Baraboo	5/6-5/13	54	13	4		
Dane Co.						
Deerfield	5/4-5/11	305	12	5	0	
Madison	5/7-5/13	2	22	3	2	
Dodge Co.						
Brownsville	5/7-5/13	42	57	0	0	
Green Co.						
Brodhead	5/3-5/13	2	39	2	20	
Ozaukee Co.						
Mequon	5/4-5/11	500	32	2.8		
Waukesha Co.						
New Berlin	5/7-5/14		2	2		
Racine Co.						
Franksville	5/7-5/14		30	3		
Rochester	5/7-5/14	338	22	7.1	0	
Jackson Co.						
Hixton	5/4-5/11	44	2	1		
Pierce Co.						
Beldenville	5/1-5/8	10	5	2	0	
	4/24-5/1	240	2	0	0	
Spring Valley	5/7-5/14	357	51	6	2	
Marquette Co						
Montello	5/2-5/9	432	3	0	0	
Brown Co.						
Oneida	5/3-5/10	360	40	1	0	
Fond du Lac Co.						
Malone	5/6-5/13	10	15	0		
Rosendale	4/28-5/10	161	43	0	0	
Marinette Co.						
Wausaukee	5/7-5/14	21	7	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

Apple Scab Spore Maturity Network report 5/14/04			
Orchard	date of green tip	latest data	percent mature
Prairie du Chien	4/14	5/12	88
Rochester	4/14	5/11	77
Gays Mills	4/14	5/10	75
Mt. Vernon	4/15	5/10	70
Plymouth	4/16	5/11	56
Malone	4/17	5/13	65



Department of Agriculture,
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Division of Agricultural Resources Management
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Web Site of the Week

Cornell University Vegetable MD Online

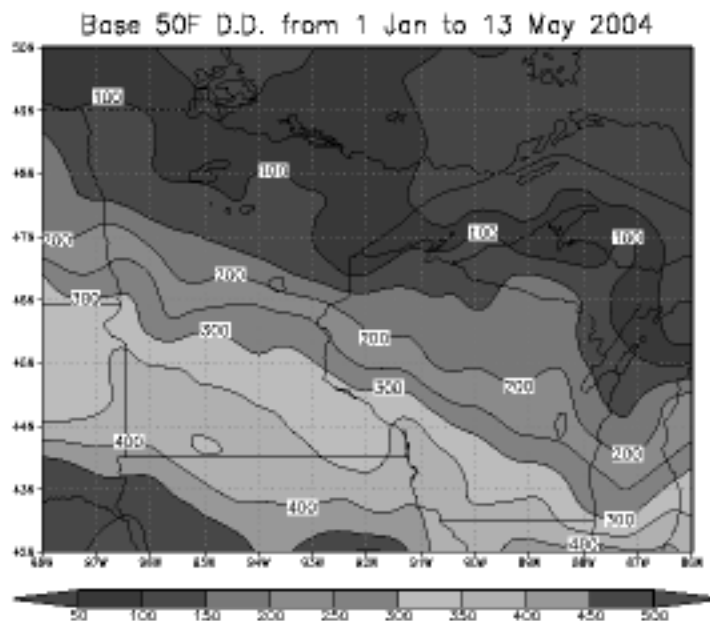
<http://vegetablemdonline.ppath.cornell.edu/Home.htm>

Wonder what those spots are on the broccoli leaves? Can't figure out what's eating the squash? Cornell University's Vegetable MD Online can help you solve these and other vegetable growing mysteries.

Quote of the Week

He was a very inferior farmer when he first begun . . . and he is now fast rising from affluence to poverty.

- Mark Twain (1835-1910)



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