



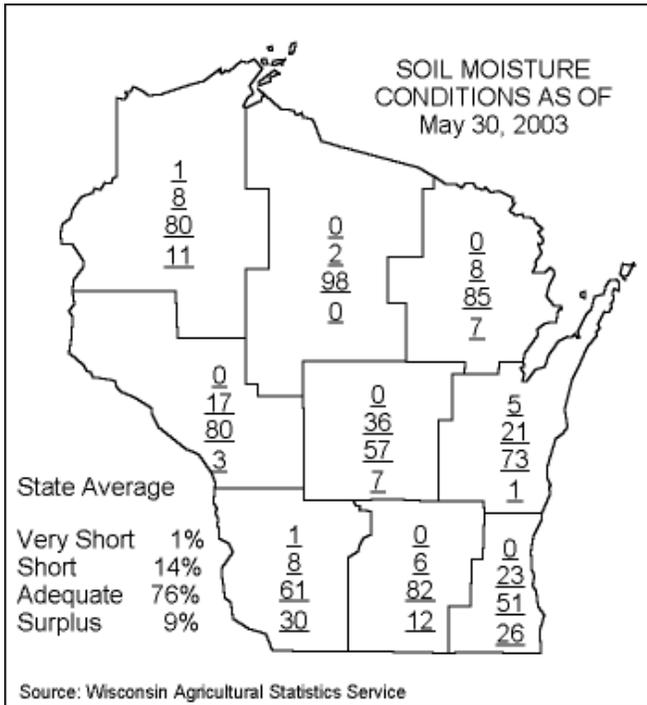
Wisconsin Pest Bulletin

Wisconsin Department of Agriculture, Trade & Consumer Protection

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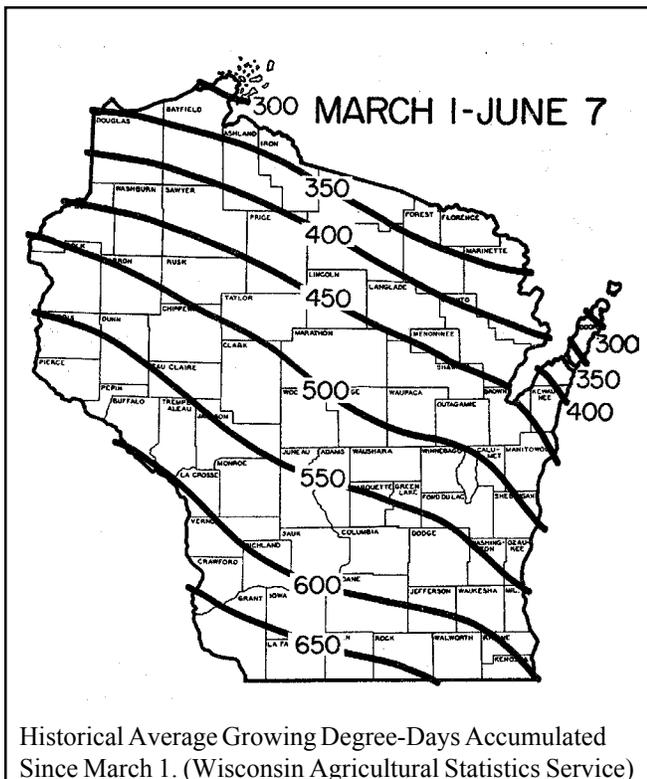


WEATHER AND PESTS

First crop alfalfa harvest is complete in the southern districts, and planting is nearing an end across the state. Peas are in full bloom in the south and pod set is expected to begin in the next week. The first flight of **European corn borer** moths is also well underway. Warmer evening temperatures in the week ahead will favor egg laying activity in areas where 450 DD (base 50° F) have accumulated. We are beginning to move from early to mid-season pests. In the mid-season batch of pests we anticipate increased activity of the **bean leaf beetle**, **soybean aphid**, **corn rootworm**, **European corn borer**, **stalk borer**, **armyworm**, and the **potato leafhopper**.

Growing degree days from March 1 through June 5 were:

Site	GDD*	2002 GDD	Normal GDD	Base 48	Base 40
SOUTHWEST					
Dubuque, IA	545	531	638	545	1059
Lone Rock	549	489	607	531	1047
SOUTHCENTRAL					
Beloit	527	508	635	533	1046
Madison	502	464	605	512	1011
Sullivan	482	472	583	480	977
Juneau	458	449	538	466	957
SOUTHEAST					
Waukesha	419	442	570	423	901
Hartford	416	424	533	424	900
Racine	355	412	565	366	816
Milwaukee	361	391	544	371	819
EAST CENTRAL					
Appleton	430	358	475	434	887
Green Bay	344	298	447	346	768
CENTRAL					
Big Flats	519	442	521	494	987
Hancock	504	430	519	497	977
Port Edwards	476	393	512	453	921
WEST CENTRAL					
LaCrosse	554	509	592	537	1046
Eau Claire	550	414	518	531	1035
NORTHWEST					
Cumberland	483	332	477	451	900
Bayfield	320	217	281	268	629
NORTH CENTRAL					
Wausau	427	328	465	397	839
Medford	415	293	451	379	814
NORTHEAST					
Crivitz	341	261	393	329	739
Crandon	370	261	375	330	749



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

Alfalfa weevil – Moderate populations of larvae and moderate to high amounts of tip feeding damage are apparent in south central and central alfalfa fields. Scout second crop regrowth now to assess potential injury and prevent further damage.

Stalk borer – Light amounts of feeding injury were evident in nearly all of the corn fields surveyed this week. Infested plants were mostly confined to the edge row, but some feeding was detected on interior rows as well. See CORN section for a description of stalk borer feeding injury and economic thresholds.

European corn borer – With the first moth flight underway in the southern part of the state, scouts can begin looking for egg masses along the midrib on the undersides of corn leaves. Expect peak adult emergence at 631 DD, which could occur in the southwest by June 14 if warm conditions persist.

Soybean aphid – Since this exotic soybean pest turned up in Wisconsin in 2000, the first aphids of the season have generally been detected during the second or third week of June. Once soybeans reach the V2 stage, scouts should begin examining plants for aphids, look first at the youngest trifoliolate. For detailed scouting information, see SOYBEAN section.

Bean leaf beetle – Adults are widespread throughout the southern third of the state, but not particularly abundant just yet. Nearly every emerging soybean field surveyed had a small percentage (<5%) of bean leaf beetle defoliation. Soybean fields will continue to sustain defoliation in the week ahead, as more bean leaf beetles migrate in from nearby forage crops.

Potato leafhopper – Counts average between 0.5 and 1 per sweep in most alfalfa fields. No reproduction was noted this week, but scouting is encouraged in second crop regrowth, where populations may build rapidly when conditions are right.

Armyworm – Adults have not yet appeared in high numbers in southern black light traps, but we expect counts to increase by next week. Larvae are present in low numbers on young corn fields, suggesting adults are active as well.

Corn rootworm – Egg hatch is occurring and early instar larvae will begin feeding on susceptible early -planted corn roots at any time now.

CORN

Stalk borer – Characteristic stalk borer feeding damage was

Stalk borer

Marlin E Rice

<http://www.ipm.iastate.edu/ipm/icm>

evident in the margins of several Adams and Juneau Co. corn fields surveyed during the early part of the week. The number of plants with signs of stalk borer feeding ranged from 20-25 per 100 plants in the edge rows. Further into the fields only 2-6 per 100 plants showed signs of damage. Unfolding the whorl on three of the plants revealed tiny, 2nd instar larvae.

Stalk borer damage is usually confined near the margins of fields with weedy fence rows, but under the right conditions, damage is possible well into fields. When treatment is warranted, it is often only necessary to spot treat problem areas. For current Wisconsin recommendations on stalk borer control, consult University of Wisconsin-Extension Bulletin #A3636, Pest Management in Wisconsin Field Crops at <http://cf.uwex.edu/ces/pubs/pdf/A3646.pdf>

Stalkborer damage

Marlin E. Rice

<http://www.ent.iastate.edu/Imagegal/plantpath/corn/stalkborer/3936.135sborerinj.html>

Armyworm – Damage attributed to 3rd and 4th instar larvae was detected at the rate of 15 per 100 plants in a southern Juneau Co. corn field. No feeding was observed on plants in the interior of the field. Armyworm damage in corn results in ragged leaves and eventually defoliated plants. Their frass (feces) is usually also present in the whorl of the plant. Damage is most frequently observed in the edge rows so scouts should avoid margins when estimating the number of infested plants.



European corn borer – Moth flight has continued to increase slowly over the southern and central parts of the state and egg laying is expected to get underway in the days ahead. No egg masses were detected in Adams, Dane or Juneau Co. fields. Peak flight is expected at 631 DD, and following that event, the next most important event to bear in mind is the first generation treatment period between 800-1000 DD. Scouts are encouraged to look for egg masses in the weeks ahead to determine the potential impact of the first generation of larvae. If it appears problems may arise, plan to treat within the period recommended above. Treatments in the 800-1000 DD window target tiny first generation larvae, and are warranted when larvae are present and feeding is observed on 50% or more of the plants.

FORAGES

Alfalfa weevil – Tip feeding in uncut, 16-24" Adams and Juneau Co. alfalfa ranged from 25-60%, exceeding the economic threshold of 40% in most of the fields surveyed. Counts of larvae ranged from 3.3 to 5.3 per sweep. Larvae were in all stages of development, but the smaller instars were more numerous. Feeding injury will increase as the larvae grow larger and become capable of chewing more foliage. Growers who plan to harvest in the next few days can expect numbers of larvae to decrease substantially once these fields are cut, but second crop regrowth should be monitored closely to prevent additional injury. In the south, second crop regrowth appears to be rebounding nicely, but these recently-cut fields are still susceptible to weevil populations in the upcoming week.

Meadow spittlebug – Numbers of nymphs have risen slightly since last week, but in most fields counts remain just below the threshold of one nymph per stem. The nymphs observed in south central Wisconsin alfalfa fields are nearly full grown.

Potato leafhopper – Adults remain relatively low in alfalfa fields, seldom exceeding one per sweep.

Pea aphid – Winged adults were swept from Adams and Dane Co. pea fields. On the whole, counts remain low. All fields surveyed had under 9 per 50 sweeps. A quick estimate suggests 20% of the present population is winged.

Plant bugs – Nymphs are abundant in Juneau, Adams and Portage Co alfalfa fields. Counts of alfalfa, tarnished and rapid plant bug nymphs range from 2.7 to 3.9 per sweep in the central region of the state.

SMALL GRAINS

Rust— Despite continuing reports of significant stripe and leaf rust in Kansas and Missouri, and reports of leaf rust appearing in Minnesota and North Dakota, very little rust of any sort was detected in south central Wisconsin small grains fields visited in the last week. Alternate hosts (barberry for stem rust, buckthorn for crown rust) have shown infection for several weeks. Reports from Minnesota indicate that the severity of *Puccinia* infection on barberry is at the highest levels observed in 40 years. In contrast, rust-susceptible barberries in Dane Co. are showing considerably less infection than in the past three years.

Powdery mildew— The incidence of powdery mildew was low in winter wheat fields in Iowa and Lafayette Cos., and the disease was not detectable in fields in Dane, Green and Sauk Cos. As usual, powdery mildew was greater in broadcast fields than in drilled fields. However, as most of the broadcast fields appear to be meant for green chop, the disease is probably not significant in these fields.

SOYBEANS

Bean leaf beetle – Low levels of overwintered adults are widespread throughout the southern third of the state. A majority of the emerging soybean fields surveyed had a small percentage (<5%) of bean leaf beetle defoliation. Expect defoliation to increase as more beetles migrate to emerging soybeans from nearby forage crops. During the early stages of soybean development the threshold for bean leaf beetles is 16 per foot of row. At V2+ the threshold increases to 39 per foot of row. Some scouts may prefer to count the number of beetles per plant instead of the number per foot of row. In that case the thresholds 2.0 to 4.4 beetles per plant at VC, 3.1 to 6.8 beetles per plant at V1, and 4.9 to 10.7 beetles per plant at V2.

Soybean aphid – Low levels of soybean aphids are expected to appear in soybeans by next week. As aphids arrive it will be important to begin monitoring infestations to determine how fast they're building and the potential need for control. In recent years aphid populations multiplied rapidly and spread throughout a field within two weeks following arrival. Last year we didn't see the same levels of infestation or the rapid population explosions, but that doesn't mean they won't occur this season. The soybean aphid is still a

Soybean aphid

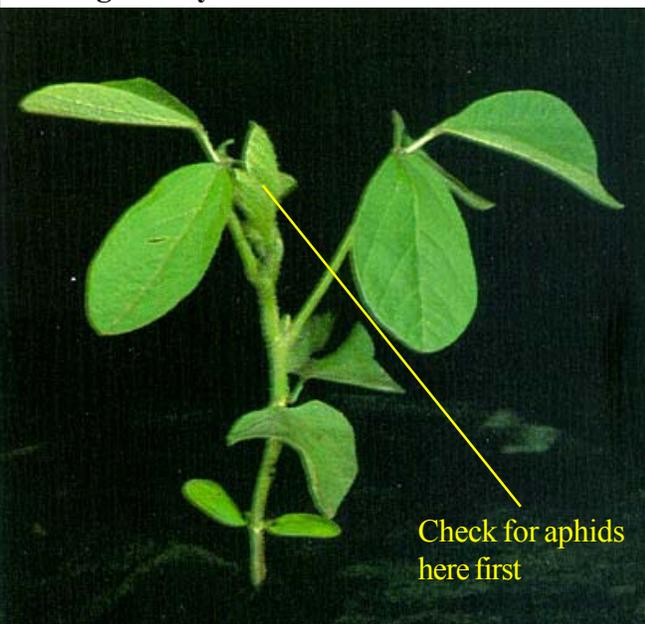


H. Russell, University of MN Extension Service
<http://www.soybeans.umn.edu/crop/insects/aphid>

relatively new pest, and we don't know enough about how populations might fluctuate from year to year.

The key to preventing problems later in the season is to monitor regularly, beginning at the V2 stage. Plants that are 6-8 inches tall and have three nodes with two unfolded leaflets have reached V2-stage of growth. Examine the new growth first, where the earliest migrants will most likely be found. Also examine the undersides of new upper leaves, the petioles and the upper portion of the stem. Count the total number of aphids per plant and keep a record of the per-plant counts from week to week. DO NOT treat fields if you detect aphids in the week or two ahead. Spraying when aphids first arrive and counts are low will be ineffective. Instead, wait until several hundred aphids per plant are present. Expect aphid populations to build during the vegetative stages and

V2 Stage of Soybean Growth



North Dakota State University

NDSU Extension Service

peak around flowering. The period of most rapid population growth typically begins in the early to mid-bloom stage. No stage-specific thresholds have been developed just yet, so the following recommendation is the best we have at this time. Treat for soybean aphid when several hundred aphids are present on the upper trifoliolate leaves, petioles and stems, but before plants show noticeable signs of damage.

APIARY

EPA petitioned to allow Api-Life VAR (thymol) pesticide to control varroa mite on honey bees in Wisconsin -- WI DATCP has requested US EPA approve a specific label exemption under Section 18 of the Federal Insecticide, Fungicide and Rodenticide Act, for the use of Api-Life Var (thymol) pesticide to control varroa mite on honey bees. Studies show that after continued use, the varroa mite becomes resistant to the commonly-used miticide, Check Mite Bee Hive Pest Control strips. Alternating Api-Life Var, a plant-derived product, with Check Mite will help off-set the potential for resistance and control varroa mites that are already resistant. A final decision from EPA is expected by mid-July. For more information, contact Patricia Kandziora at 608-224-4547 or Anette Phibbs at 608-266-7132.

FOREST, SHADE TREE, ORNAMENTALS AND TURF

Ash plant bug — We are starting to find nymphs during our dealer inspections on ash in Waukesha and Rock Cos. The adults will appear soon and start laying eggs for the second generation in mid to late June. The best time to treat is when the plant bugs are in the nymph stage, usually when the new growth for the season is expanding and is 3-4" developed. The best indicator plants would be when redbud is blooming or when koreanspice viburnum is blooming.

Bronze birch borer — Now is the best time to be treating for this pest of birch. Treatments are timed for when snowball viburnum and weigela are blooming. Systemic insecticides can be used as well as trunk sprays directed at killing the newly hatched larvae.

Elm sawfly- Complaints of elm sawfly adults emerging from the ground were received from Monroe, Green and Jefferson Cos. (UWEX)

Four line plant bug- This common pest was found damaging perennials in Dane, Eau Claire and Brown Cos. (UWEX)

Gypsy moth- Second instar larvae were reported in Racine Co. (UWEX)

Honeylocust plant bug- Honeylocust in Richland Co. were found riddled with this pest. (UWEX)

Leaf miners — Leaf mines were found on elm and birch in Crawford Co. Treatments should be made when snowball

viburnum is blooming or when French hybrid lilacs are late or finished blooming. In the southwest part of the state snowball viburnum is currently in full bloom.

European pine sawfly- Larvae are moving off trees in Waukesha, Dane and Columbia Cos. (UWEX)



Red pine sawfly- Red pine sawfly defoliation on red pine was noted in Iowa Co. (UWEX)

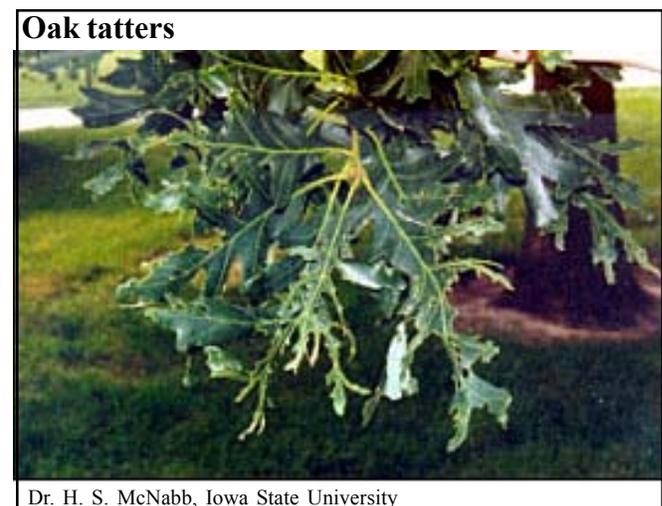
Spring cankerworm — Larvae were found at a dealer in Waukesha Co. on red maple in moderate amounts. This larva varies from red to black to occasionally light green. This cankerworm moves and looks like a looper and generally prefers elm and apple trees. Control is rarely needed because natural controls keep populations below outbreak levels. The spring cankerworm is similar to **fall cankerworm**.

Oak tatters - Nursery inspectors have noted oak tatters on many oak trees for sale in garden centers this spring. This oak condition was also found on woodlots of bur oaks in northern Dane and Iowa Cos.

Oak tatters is a condition that primarily affects oaks in the white oak group, including bur, white and swamp white oaks. The red oak group (red, black and shingle oaks) are less susceptible. Symptoms show as soon as new leaves unfurl. Leaves look lacy or tattered. The leaves have reduced interveinal tissue, which can make it look like insect feeding. However, oak tatters is a physiological or environmental condition, likely caused by leaf tissue damage in early spring. Entomologists and foresters debate over what causes this damage. One of three causes is likely: either the buds and

young leaf tissues are injured by low temperatures in early spring, by insects feeding or ovipositing (laying eggs) in the buds or developing leaves, or by herbicides causing abnormal development of leaves.

Affected oaks will usually produce new leaves that are not tattered. Trees can survive the stress of releafing; however, they will be more vulnerable to other stresses such as drought or insect damage that year. The best management for trees that have tattered leaves is to minimize stress. Mulch new and mature urban trees to reduce grass competition and mechanical damage. Water during dry periods and avoid damaging roots or changing grade. (information from the *USDA Forest Service Oak Tatters Pest Alert*)



Bacterial blight — Another spring pathogen, bacterial blight is being found during dealer inspections in Douglas, Grant, Outagamie and Pierce Cos. on lilac in light to moderate amounts. This bacterial pathogen can be very damaging to lilacs and is easily spread from one plant to another by pruning or water splashing. Plants that are infected should not be pruned unless you disinfect the pruners between cuts.

Powdery mildew — This common garden fungus is being found in Brown, Grant and Ozaukee Cos. on roses, dogwood and Rudbeckia in trace to light amounts. The fungus is on the upper surface of the leaves and is generally fuzzy white or white grey in color and can be wiped off by hand. The disease is favored by wet weather and poor air circulation. The best ways to reduce or prevent getting powdery mildew are to select plants which are resistant to the fungus and to select a proper site with good air circulation. There are many chemical controls for powdery mildew, but once the infection has occurred only control of secondary infections is possible. Remove and destroy infected leaves in the fall.

Anthracnose — This fungal disease affects a wide range of

Anthracnose on oak

Gail Ruhl, Department of Botany and Plant Pathology, Purdue University

trees and shrubs and is being found during our nursery dealer inspections on oak, ash, crabapple, maple, birch and daylilies. The disease is being found in trace to heavy amounts in Grant, Outagamie, Ozaukee and Pierce Cos. There is no effective control for anthracnose once the symptoms are noticeable. The best thing to do is keep the plant healthy by applying fertilizers as needed and to water the tree if drought occurs. Usually the dry weather of summer helps to reduce the spread and effects of anthracnose. Most host plants will survive nicely, but their appearance may be a bit ragged for awhile.

Pseudomonas leaf spot— This bacterial leaf spot is commonly found on mockorange and impatiens, and occasionally on a wide array of other host plants. We found this pathogen during dealer inspections in Grant and Douglas Cos. in trace to light amounts. The pathogen, *Pseudomonas syringae*, is the same pathogen which causes bacterial blight on lilac. The damage looks different in the leaf spot form; rarely do you see the damage on the stems of the plant. The leaf spots are throughout the plant and, depending on host, may have a red or purple halo around the necrotic area, common on impatiens. In mockorange you see dark, almost black, angular necrotic areas on the leaves. Water splashing and rain spread this bacterium; overhead watering is a major culprit in nursery settings. Chemical controls can be effective in reducing infections.

STATE/ FEDERAL PROGRAMS

Gypsy moth spray program- The Wisconsin Cooperative Gypsy Moth program began aerial applications of biological pesticides to control gypsy moth on May 21. The program will apply three different products: Btk, a naturally-occurring soil bacteria that targets gypsy moth caterpillars; Gypchek, a virus specific to gypsy moth caterpillars; and pheromone flakes, which disrupt the mating habits of adult gypsy moths.

There were 55 communities in 16 counties that participated in the gypsy moth suppression program coordinated by the Wisconsin Department of Natural Resources, covering about 29,000 acres. Under the Slow the Spread (STS) program coordinated by the Wisconsin Department of Agriculture, Trade and Consumer Protection, about 330,000 acres are targeted for treatment. By June 6, all suppression applications were completed. The STS program completed all applications of Btk and Gypchek except for five sites in Bayfield County and two sites in Iron County that require one more application of Btk sometime after June 11.

Beginning in late June, nearly 260,000 acres in 10 counties will be sprayed with pheromone flakes. These aerial applications will continue through July and possibly August depending on the weather.

Approximate treated acreage to date (5/21/03-6/6/03)

Suppression acres treated with Btk = 24,000
 Suppression acres treated with Gypchek = 3,400
 Slow the Spread acres treated with Btk = 86,000
 Slow the Spread acres treated with Gypchek = 6,600

A message on the gypsy moth toll-free hotline will carry updates on spraying activities. Callers can leave messages for staff. Dial 1-800-642-6684. View maps of the spray sites on our web site at <http://www.datcp.state.wi.us> and search on the key words 'gypsy moth.'

Gypsy moth trapping program - Trappers are continuing to set gypsy moth traps statewide. As of June 4, 2003, trappers have set 6,303 traps (23%) of the expected total. Two counties have been completed, Kenosha and Racine. Trap setting will continue for about four more weeks and should be completed by early July.

FRUIT

USDA proposes to allow importation of chinese fragrant pears- The U.S. Department of Agriculture's Animal and Plant Health Inspection Service is proposing to allow the importation of fragrant pears from China under certain conditions. Fragrant pear has been around for over 1500 years. This fruit is characterized by thin skin, fine pulp, jade green color and rich fragrance.

To be eligible for importation, the pears would have to be grown in the Korla region of Xinjiang Province in a production site that is registered with the national plant protection organization of China. The fragrant pears would be subject to both pre-harvest and post-harvest inspections.

In addition, the pears would have to be packed in insect-proof containers that are labeled in accordance with the regulations and safeguarded from pest infestation during transport to the United States.

This action would allow fragrant pears to be imported from China while continuing to provide protection against the introduction of plant pests into the United States.

Notice of the proposed rule was published in the May 23 Federal Register. APHIS documents published in the Federal Register and related information, including the names of organizations and individuals who have commented on APHIS dockets, are available on the Internet at <http://www.aphis.usda.gov/ppd/rad/webrepor.html>.

Fragrant pears



<http://www.wingmau-fruit.com/fruit/fragpear.htm>

ODDS -N- ENDS

Termite- Swarms were reported in Milwaukee and LaCrosse Co. (UWEX)

CALENDAR OF EVENTS

Greenhouse IPM seminars:

America's Best Flowers in Cottage Grove
June 10, 2003. 9:00 am - 4:00 pm \$10

Karthausers in Cedarburg
June 11, 2003. 9:00 am - 4:00 pm \$10

Natural Beauty Greenhouses in Denmark
June 24, 2003. 9:00 am - 4:00 pm \$10

Tropical Gardens, Inc. in Mosinee
June 25, 2003. 9:00 am - 4:00 pm \$10
FMI call Karen Delahaut 608-262-6429 or email kadelaha@factstaff.wisc.edu

Rhineland Potato Grower Field Day

July 12, 2003. UW Rhineland Research Station
(715) 369-0619

Central WI Potato Field Day

July 16, 2003. Hancock Research Station
(715) 249-5961

Northeast Wisconsin Potato Field Day

July 17, 2003. Langlade County Airport
Contact: Ken Williams, UWEX (715) 627-6236

Wisconsin Fresh Market Vegetable Growers and Berry Growers Field Day

Country Bumpkin Farm in Wisconsin Dells
July 18, 2003. 9:00 am - 3:00 pm
Contact: Karen Delahaut 608-262-6429 or email kadelaha@factstaff.wisc.edu

American Phytopathological Society Annual Meeting

Aug 9-13, 2003. Charlotte, NC
www.apsnet.org/meetings/2003/

West Madison Horticultural Field Day featuring a Mexican Garden

August 16, 2003.
Contact: Judy Reith-Rozelle at West Madison 608-262-2257

WI Christmas Tree Producers Association Summer Convention

Aug. 15-16, 2003
Menominee Casino-Bingo-Hotel, Kesheena
Tour Hanauer's Tree Farms, Shawano
Contact: Cheryl Nicholson, Executive Secretary
www.christmastrees-wi.org
Phone (608)745-5802

Apple Insect Trapping Results						
County	Date	STLM	RBLR	CM	OBLR	
Crawford Co.						
Gays Mills-W2	5/23-5/30	0	0	0	1	
Richland Co.						
Hill Point	5/20-5/30	250	5	0	0	
Iowa Co.						
Dodgeville	5/29-6/5	22	0	22	63	
Dane Co.						
Deerfield	5/26-6/3	25	3	0	0	
Green Co.						
Brodhead	6/28-6/3	0	1	0	0	
Pierce Co.						
Spring Valley	5/29-6/6	26	1	0	0	
Beldenville	5/28-6/4	10	0	0	0	Apples 12-16 mm
Jackson Co.						
Hixton	5/27-6/1	4	2	1	0	
Fond du Lac Co.						
Rosendale	5/27-6/2	181	32	3		
Malone	5/29-6/5	20	5	1	0	
Marquette Co.						
Montello	5/25-6/1	96	21	0	0	
Ozaukee Co.						
Mequon	5/28-6/2	145	1	0.1		
Sheboygan Co.						
Plymouth	5/30-6/6	143	22	7		
Waukesha Co.						
Waukesha	5/24-5/30			0		
Bayfield Co.						
Washburn	5/23-5/30	340	0		0	Full bloom

Getting ready to treat gypsy moths- 2003





Department of Agriculture,
Trade & Consumer Protection
Agricultural Resource Management Division
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QUOTE OF THE WEEK

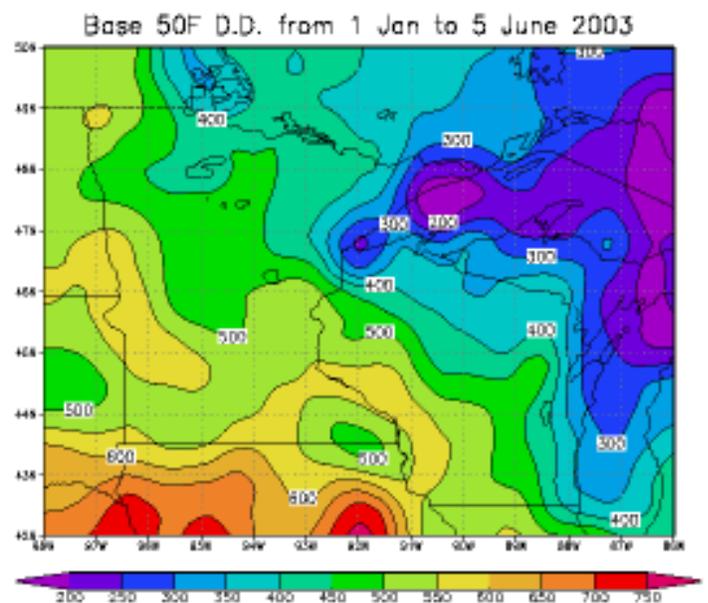
“Agriculture... is our wisest pursuit, because it will in the end contribute most to real wealth, good morals and happiness.”

Thomas Jefferson to George Washington, 1787

WEBSITE OF THE WEEK

<http://www.weeds.iastate.edu/>

Weed Science at Iowa State—lots of good information about up-and-coming weed problems, resistance management and more. Be sure to check out the “Herbicide Ad Hall of Shame”.



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