



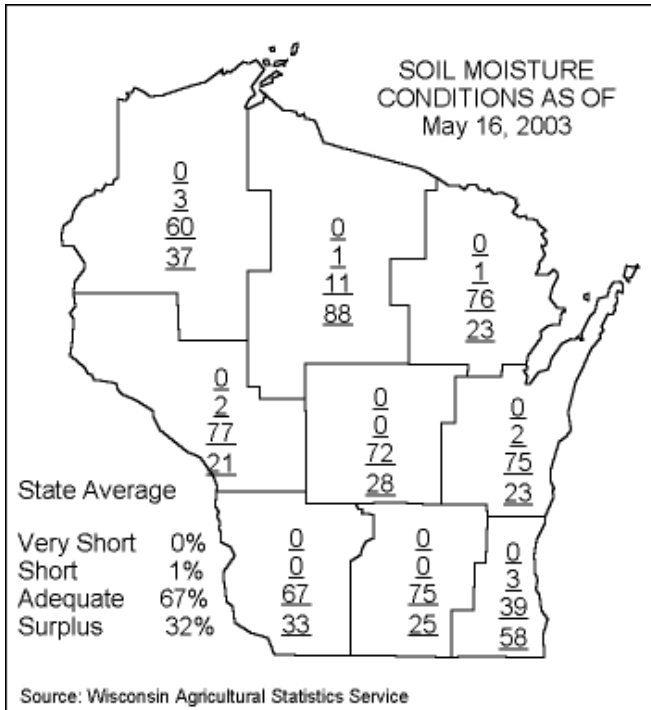
Wisconsin Pest Bulletin

Wisconsin Department of Agriculture, Trade & Consumer Protection

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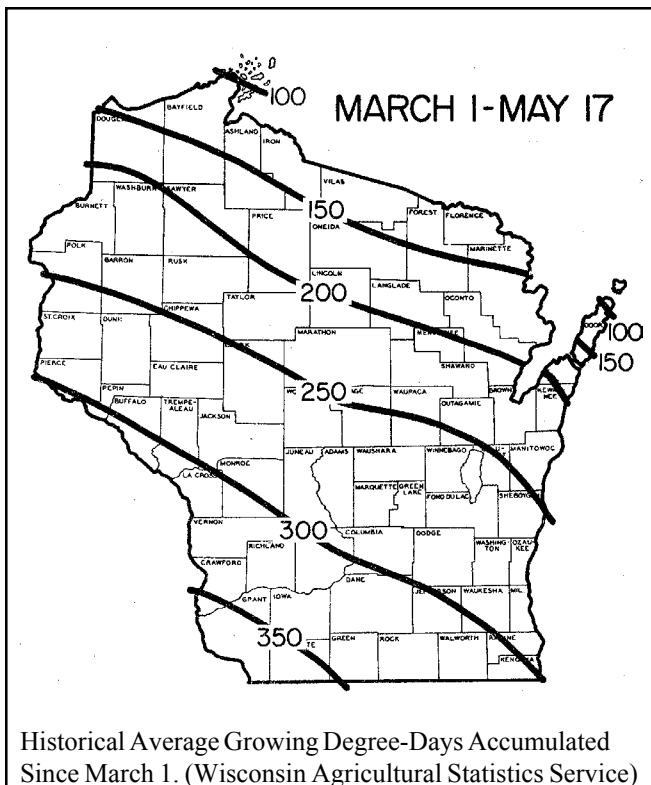


WEATHER AND PESTS

Across the state, field activity is picking up. Alfalfa development has been rapid and harvest is beginning in the south. Corn planting is nearly complete, while soybean planting has just begun. Throughout the south, corn emergence is advancing; seedlings are just beginning to emerge in the northern regions. A few scattered fields have areas that are still too wet to cultivate, and some are developing thick quackgrass growths. Insect activity is booming. Newly-hatched **alfalfa weevil** larvae are present in all southern alfalfa fields, more **potato leafhopper** migrants continue to arrive, **tarnished plantbug** nymphs are appearing in sweep nets, and **pea aphid** numbers are increasing exponentially. With insect activity on the rise, the second crop regrowth of alfalfa will be vulnerable to attack.

Growing degree days from March 1 through May 22 were:

| Site | GDD* | 2002 GDD | Normal GDD | Base 48 | Base 40 |
|----------------------|------|----------|------------|---------|---------|
| SOUTHWEST | | | | | |
| Dubuque, IA | 395 | 337 | 381 | 382 | 787 |
| Lone Rock | 390 | 308 | 341 | 368 | 780 |
| SOUTHCENTRAL | | | | | |
| Beloit | 384 | 322 | 348 | 378 | 784 |
| Madison | 351 | 289 | 338 | 350 | 744 |
| Sullivan | 342 | 298 | 318 | 329 | 721 |
| Juneau | 317 | 278 | 290 | 313 | 697 |
| SOUTHEAST | | | | | |
| Waukesha | 292 | 271 | 312 | 284 | 657 |
| Hartford | 285 | 259 | 285 | 281 | 649 |
| Racine | 244 | 249 | 306 | 242 | 586 |
| Milwaukee | 242 | 234 | 297 | 239 | 580 |
| EAST CENTRAL | | | | | |
| Appleton | 279 | 208 | 252 | 270 | 616 |
| Green Bay | 215 | 162 | 223 | 206 | 522 |
| CENTRAL | | | | | |
| Big Flats | 356 | 269 | 284 | 328 | 718 |
| Hancock | 343 | 257 | 277 | 331 | 707 |
| Port Edwards | 319 | 229 | 275 | 291 | 655 |
| WEST CENTRAL | | | | | |
| LaCrosse | 382 | 307 | 318 | 358 | 761 |
| Eau Claire | 377 | 241 | 275 | 350 | 748 |
| NORTHWEST | | | | | |
| Cumberland | 319 | 180 | 235 | 288 | 636 |
| Bayfield | 195 | 98 | 109 | 159 | 426 |
| NORTH CENTRAL | | | | | |
| Wausau | 279 | 181 | 236 | 250 | 590 |
| Medford | 272 | 156 | 229 | 240 | 575 |
| NORTHEAST | | | | | |
| Crivitz | 207 | 136 | 180 | 190 | 498 |
| Crandon | 236 | 135 | 172 | 203 | 523 |



ALERTS

Brown root rot- This alfalfa disease, new to Wisconsin, has just been confirmed by the UW Plant Disease Diagnostics Clinic. The disease is also known as **Plenodomus root rot** or **winter root rot**. The alfalfa sample was submitted by a crop consultant who collected the sample in Marathon Co. Craig Grau of the the UW-Madison Dept. of Plant Pathology made the initial diagnosis and the diagnosis was confirmed via PCR techniques by George Vandemark and Richard Larsen of USDA-ARS in Prosser, WA.

Brown root rot is caused by *Phoma sclerotioides*. This disease is more common in colder climates and has primarily been a problem in Canada. Symptoms include production of slightly sunken, brown lesions with black borders on taproots. Symptoms may appear similar to feeding injury associated with clover root curculio. Lesions can enlarge over time and eventually rot through taproots. Infected roots may eventually shrivel and die, and can subsequently be colonized by **soft rot bacteria** that cause the root to have a soft, mushy appearance.

LOOKING AHEAD

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

European corn borer – The first moths of the season appeared in a Dane Co. black light trap earlier this week. The majority of those caught were females, but it will be at least a week or two before egg laying is possible. A few moths were also observed flying in Rock and Jefferson Co. alfalfa fields.

Potato leafhopper – An increasing number of migrants were detected in south central and southeastern alfalfa fields, and adults should begin arriving in the central part of the state in the days ahead. For now, numbers in southern fields remain below the economic threshold, but this could change rapidly as temperatures rise next week and into early June.

Alfalfa weevil – Numbers of larvae are on the rise and could exceed the economic threshold in fields that are not harvested soon. Scouting is strongly encouraged in areas where 300-400 weevil DD (base 48°F) have accumulated.

Meadow spittlebug – Spittle masses have become evident in the south, and in some fields high numbers of nymphs were collected in sweep nets. Look for the number of spittle masses to increase over the weekend, and to appear in more fields.

Pea aphid – Winged adults were detected in nearly all alfalfa fields surveyed this week. Populations have grown substantially since last week. Expect adult migration to pea fields to get underway shortly.

Bean leaf beetle (BLB)– Pest survey staff are sweeping

alfalfa fields across the state in an effort to determine the range and abundance of overwintered adults and to better establish the relationship between bean leaf beetle and **bean pod mottle virus (BPMV)** transmission in Wisconsin. This week, overwintered adults were detected in Dane, Iowa, Green, Jefferson, Lafayette, Rock and Waukesha Co. forages. Current findings indicate that relatively high numbers of beetles survived the winter months here in Wisconsin. This overwintered population could cause some serious defoliation as soybean seedlings begin to emerge, but it is unclear whether BPMV transmission will be a factor. The overwintered beetles collected during this survey will be tested for BPMV at a later date (See **SOYBEAN** section for more info on BLB and BPMV).

FORAGES

Alfalfa weevil – Larvae from overwintered eggs continued to emerge this week. Sweep net counts of 1st and 2nd instar larvae ranged from 2-12 per 50 sweeps in Dane, Jefferson, Rock and Waukesha Cos. The “shot hole” type of early larval feeding damage in alfalfa tips is visible but insignificant. Adults were also active in the tall, dense fields surveyed this week. Numbers generally averaged less than 6 per 50 sweeps.

Under current weather conditions female alfalfa weevils have the potential to lay 60-70 eggs per night. At this rate, larval populations could increase rapidly in one week. If southern alfalfa fields are harvested soon there should be no significant damage to the first crop, but second crop regrowth will likely be at risk for injury. In fields where high levels of tip feeding are observed, growers will have to start thinking about making timely and appropriate management decisions. The term “tip feeding” indicates the alfalfa stem is showing obvious signs of feeding activity. To determine the percent of tip feeding collect 30 stems at random. If 15 of the 30 stems collect have feeding damage, the percent tip feeding would be 50%. Control is warranted when 40% tip feeding is observed more than 7-10 days prior to harvest, and in new growth when 10% of the tips show signs of damage. For more information on scouting and control, see UW-Extension publication A2995, The Alfalfa Weevil.

Pea aphid – Moderate numbers of winged adults and some large wingless individuals were detected in southern alfalfa fields surveyed this week. Populations have grown substantially since last week, and reproduction was noted in Rock, Jefferson and Dane Co. fields. Counts averaged between 3-12 per sweep. Adults should be present in pea fields soon.

Alfalfa plant bug – Low numbers of nymphs are appearing in southern fields. It is not clear what impact this insect has on alfalfa, but when populations grow large enough, the combination of alfalfa and **tarnished plant bugs** can reach economically important levels. The nymphs swept earlier this

week are still only in the early instars. Cutting early is usually an effective way to reduce plant bug populations. The threshold for plant bugs in alfalfa 3" or shorter is 3/sweep, and increases to 5/sweep in alfalfa that is taller than 3".

Meadow spittlebug – Numbers are on the rise, but remain below the threshold of one nymph/stem in all areas surveyed. Spittle masses have grown evident in most fields. Nymphal development is just beginning and most of those being swept are still in the early instars. Look for the number of spittle masses to increase substantially in alfalfa fields by next week.

Potato leafhopper – The presence of this pest was noted in nearly all Dane, Jefferson, Rock, Waukesha and Grant Co. alfalfa fields surveyed this week, but at varying levels. In most cases sweep net counts seldom exceeded 6 per 50 sweeps.

Grasshopper – First, second and third instar nymphs were observed feeding in alfalfa tips in Dane and Jefferson Co. fields. In general counts were low, not exceeding 4 per 50 sweeps.

Green cloverworm – Very low numbers of 2nd and 3rd instar larvae were present in southern alfalfa fields. They were found at the rate of 1-2 per 50 sweeps.

SOYBEANS

Bean leaf beetle – Wisconsin soybean growers who witnessed serious levels of bean leaf beetle defoliation last summer are wondering whether bean leaf beetle will be a concern again this year, and if so, what they should do to minimize losses. Some experienced problems with green stem at harvest and found **bean pod mottle virus (BPMV)** to be the culprit. It turns out that bean leaf beetle transmits BPMV to soybeans, which presents a number of problems when it comes to determining the best management strategy. Many want to know whether to focus control efforts on the beetle or the virus, or whether reducing beetle numbers early on is a good way to reduce virus transmission later in the season. There are two strategies for managing the problem.

The goal of the first strategy is to prevent transmission of BPMV by stopping both the overwintered and 1st generation of beetles by spraying twice, once early season and once mid-season. This strategy is only recommended for growers whose soybean plants were formally tested last summer and know for certain that BPMV was present in their fields. To consider this strategy, bean leaf beetles must also be present. If BPMV was not present, the only other reason to consider bean leaf beetle management early on is if populations reach extremely high levels (more than 2.5 beetles per plant).

The second strategy, and for a good number of growers, the most sensible strategy, is to focus on leaf feeding injury and beetle numbers rather than attempting to prevent virus

transmission. The 1st generation of beetles emerges around 1212 DD (base 46°F), takes about 50 days to complete, and usually peaks in the late vegetative or early reproductive stages. Scouting the 1st generation beetles in early July can help to predict the possibility of economic pod damage caused by 2nd generation beetles at the beginning of pod growth and development.

When populations exceed the threshold for bean leaf beetles, the field can be treated while the second generation of beetles is emerging around mid-August. In most cases, Wisconsin growers should focus on control of second generation beetles to prevent pod feeding damage, rather than worrying about BPMV transmission. Currently we still don't know enough about the relationship between bean leaf beetle and BPMV in Wisconsin to advocate using the early-season virus reducing strategy. It is the more costly approach, both economically and environmentally.

Another simple method of reducing the problem is to avoid planting early. Fewer beetles fly to fields that have delayed emergence in early June. Fewer beetles also mean that there is less chance for BPMV problems.

FOREST, SHADE TREE, ORNAMENTALS AND TURF

European pine sawfly (EPS) – The European pine sawfly, *Neodiprion sertifer*, is an introduced pest of primarily Scotch and mugo pines although it feeds on other pines, such as red, jack, Japanese red and Table-Mountain pine. It was accidentally introduced from Europe and first found in the United States at Somerville, New Jersey in 1925. It now ranges from southwestern Ontario through New England and west to Iowa.

Larvae of European pine sawfly resemble caterpillars of moths or butterflies but actually belong to the insect order Hymenoptera, the group of insects that includes ants, bees and wasps. Sawflies, however, are harmless to humans and pets as they do not sting. The term sawfly comes from the saw-like ovipositor (egg laying apparatus) the female uses to cut a slit into leaf tissue where the eggs will be deposited (see photo). EPS overwinters as eggs on needles of this season's growth. The eggs are white to yellow and are partially inserted into the needle. Hatching occurs in the spring from early April to mid-May. Young larvae first eat the edges of last year's needles while the older, bigger larvae consume the entire needle. The larvae feed in groups and will consume all the needles on one branch before moving to a new one. Only last year's needles are eaten. Because of this, trees are rarely killed by this sawfly. New foliage develops and the tree usually recovers. Growth of the tree, however, can be reduced substantially, a concern for nurseries and Christmas tree growers. Mature larvae pupate either in the soil or in protected area on the tree during late August or early September. Adults emerge from early September to late fall

and lay eggs in the needles. There is one generation a year.

European pine sawfly is attacked by a number of introduced parasites and a virus. None of the parasites have given adequate control of this pest. Colonies of larvae can be removed by clipping off infested branches and destroying them. Scouting for and removing needles with eggs on them is another method if you have the time and patience and are only dealing with a small number of trees. Chemical control is aimed at young larvae which are more susceptible than older, larger larvae. Applications should be made when *Magnolia X soulangiana* is dropping petals (100-200 Degree Days base 50°F).

Aphids—We are starting to find more aphids on stock at dealers and in the landscape. Dealer inspections have uncovered aphids on apple, monarda, astilbe and spirea in trace to light amounts. Inspections were done in Dane, Eau Claire, La Crosse and St. Croix Cos. Also, we have one report of aphids on tulips, inside the flower in Dane Co. The cold weather this week should have set them back some but as the weather gets warmer the populations are going to increase.

Borers—This report is from La Crosse Co. where, during an inspection of a dealer, two weeping willow trees were found with white milky sap flowing from the trunks in several spots. The initial identification is **flatheaded apple tree borer**. This borer has a wide host range and covers many types of shade trees.

Fletcher scale—Also known as **lecanium scale**, this pest was being found during inspections of dealers in Dodge, Eau Claire and La Crosse Cos. on 'Capitata', 'Dark Green Spreader' and 'Tauntonii' yews in trace to heavy amounts. Monitor the scale now to assess the population level. Control the crawlers in mid to late June when *Hydrangea arborescens* 'Grandiflora' is in full bloom (from Coincide and UW-Ext. bulletin A3597). A second treatment should be made within 10 days of the first treatment and should be made with a registered insecticide labeled for site.

Leafrollers — Larvae were found on goldmound, Dart's red and snowmound spirea in light amounts in La Crosse and St. Croix Cos. Symptoms include bundling of the leaves at the shoot ends for goldmound and Dart's red, and along the sides of shoots on snowmound. Prune out bundled leaves to achieve control.

Spittlebug—The first find of the year was made this week during a dealer inspection in LaCrosse Co. on potentilla in trace amounts. This pest does little damage at low levels but is unsightly. The white, spittle mass surrounds the green-colored bug and protects it from predators, parasites and pesticides. A strong spray of water on infected plants may be effective control.

Bacterial blight—We are starting to find bacterial blight

during our dealer inspections in Dane, Dodge and Eau Claire Cos. in light amounts. This bacterial problem causes leaves to curl and twist and sometimes causes the leaves die. Pruning shears used to cut out infected parts of the plant can spread disease. Pruners should be disinfected after each cut to reduce spread of the bacteria. Prune out infected plant parts to stop the spread of this disease.

Black spot—This common fungal disease of roses is starting to pick up due to recent wet weather. The leaves of roses start to yellow and black fuzzy spots appear on the upper surface of the leaves. Leaves that have older infections start dropping and the plants appear thin. Treatment with a fungicide helps to stop further infections from occurring. Spacing plants and keeping the foliage as dry as possible will further reduce disease spread. We have found black spot on roses in Eau Claire, La Crosse and Sheboygan Cos. in light to heavy amounts.

Powdery mildew—This white fuzzy fungus is a common bane of most gardeners. We are finding powdery mildew during our dealer inspections in Dodge, La Crosse and St. Croix Cos. on lilac, rose, garden phlox, salvia and verbena in light to moderate amounts. Prevention of further infections can be made with applications of a registered fungicide. Some cultural practices such as increasing air circulation by spacing plants will help.

Septoria leaf spot—Another fungal disease tied into the weather is septoria leaf spot, which is common on dogwood, spirea and many other plants. We have been finding this during our dealer inspections in La Crosse and Fond du Lac Cos. in light amounts. Increasing air circulation, watering in the morning, and watering the soil rather than the foliage may reduce this leaf spot on plants. Fungicides may prevent new infections, but cannot cure existing leaf spots. Preventive sprays have to be reapplied throughout the growing season, so cultural practices are a good way to lessen infections.

STATE/ FEDERAL PROGRAMS

Gypsy moth trapping program - Trappers have completed their initial training and will be out in full force after Memorial Day setting traps.

Our basic trapping grid for most of Wisconsin is 1 trap per 2 sq. miles. A typical township has 36 sq. miles or 36 sections and will have 18 traps set in it. Trap locations are based on using the southwest corner of a section. Trappers set traps as close to that point as possible. Our trap location maps have a 1 mile diameter circle drawn around the grid point. If a trapper cannot set a trap at the grid point, the next best location must be inside that circle.

Trappers pay particular attention to the spacing of the traps so they are not set too close to each other. Most traps are set along roads in the right-of-way. Delimitation traps are set

mainly at 4 traps per sq. mile or about 1/2 mile apart. Trappers will use roads to set most of the delimitation traps but it is important that they set traps up to 1/2 mile off the the road to get good coverage. That means trappers do set traps on private property. Each trapper is told at training to try and get permission before setting these traps. If a landowner is not home, a "Notice" is left at the house explaining the program and that a trap was set on the property. If landowners have questions or want the trap removed, they can call our hotline at 1-800-642-MOTH. We appreciate landowner cooperation in allowing our trappers to set traps on their property. Trap setting should be complete around July 4th.

CALENDAR OF EVENTS

Wisconsin Apple Growers Association IPM Field Day,
Thurs. June 5, North Freedom, WI
Info at <http://www.waga.org/hot.html> or (920) 478-4277

Rhineland Potato Grower Field Day
July 12, UW Rhineland Research Station
Contact: (715) 369-0619

Central Wisconsin Potato Field Day
July 16, WU Hancock Research Station
Contact: (715) 249-5961

Northeast Wisconsin Potato Field Day
July 17- Langlade County Airport
Contact: Ken Williams, UWEX, (715) 627-6236

Wisconsin Christmas Tree Producers Association Summer Convention
August 15-16, 2003
Menominee Casino-Bingo-Hotel, Keshena, WI
Tour Hanauer's Tree Farms, Shawano, WI

Have an event you'd like listed in our calendar? Send information (including contact info) to bulletin@datcp.state.wi.us

QUOTE OF THE WEEK

Man, despite his artistic pretensions, his sophistication and many accomplishments, owes the fact of his existence to a six-inch layer of topsoil and the fact that it rains.
- Anonymous

WEBSITE OF THE WEEK

UMN's Bugweb, providing interactive access to insect monitoring networks, including European cornborer, corn earworm, and black cutworm
<http://www.mnipm.umn.edu/bugweb/default.htm>

| Apple Insect Trapping Results | | | | | | |
|-------------------------------|---------------|-----------|------|------|-----|----------------------------|
| County | City | Date | STLM | RBLR | CM | OBLR |
| Crawford Co. | | | | | | |
| | Gays Mills-W2 | 5/12-5/18 | 100 | 6 | 0 | |
| Richland Co. | | | | | | |
| | Hill Point | 5/13-5/19 | 460 | 0 | 0 | |
| Iowa Co. | | | | | | |
| | Spring Green | 5/15-5/22 | 43 | 24 | 1 | 38 |
| Dane Co. | | | | | | |
| | Deerfield | 5/12-5/19 | 290 | 7 | 3 | 0 |
| | Madison | 5/15-5/22 | 2 | 4 | 0 | 0 |
| Green Co. | | | | | | |
| | Brodhead | 5/14-5/21 | 3 | 16 | 1 | 1 |
| Pierce Co. | | | | | | |
| | Spring Valley | 5/15-5/22 | 154 | 31 | 0 | 0 |
| | Beldenville | 5/14-5/21 | 110 | 10 | 1 | 0 |
| Trempealeau Co. | | | | | | |
| | Galesville | 5/12-5/19 | 23 | 4 | 22 | 0 |
| Jackson Co. | | | | | | |
| | Hixton | 5/12-5/19 | 33 | 4 | 1 | 0 |
| Fond du Lac Co. | | | | | | |
| | Rosendale | 5/13-5/19 | 161 | 18 | 0 | |
| | Malone | 5/15-5/22 | 20 | 9 | 1 | In the midst of petal fall |
| Marquette Co. | | | | | | |
| | Montello | 5/11-5/18 | 780 | 0 | 0 | 0 |
| Ozaukee Co. | | | | | | |
| | Mequon | 5/14-5/20 | 900 | 24.5 | 0.8 | |
| Sheboygan Co. | | | | | | |
| | Plymouth | 5/16-5/23 | 585 | 23 | 8 | 4 |
| Door Co. | | | | | | |
| | Sturgeon Bay | 5/14-5/20 | 950 | 58 | 9 | green fruitworm |
| Brown Co. | | | | | | |
| | Oneida | 5/12-5/19 | 50 | 15 | 2 | 0 |