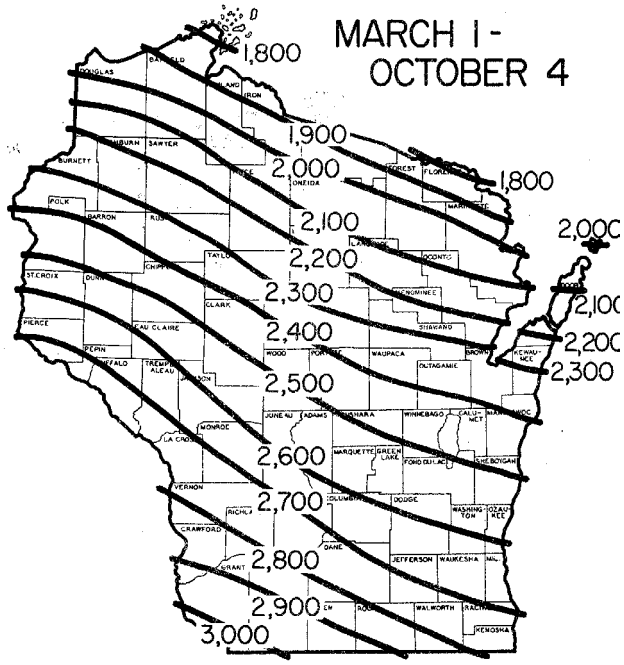
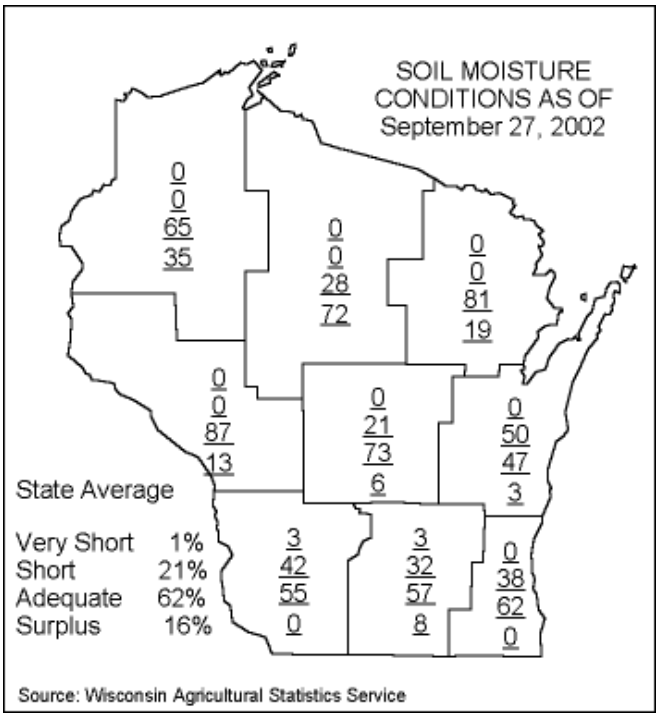
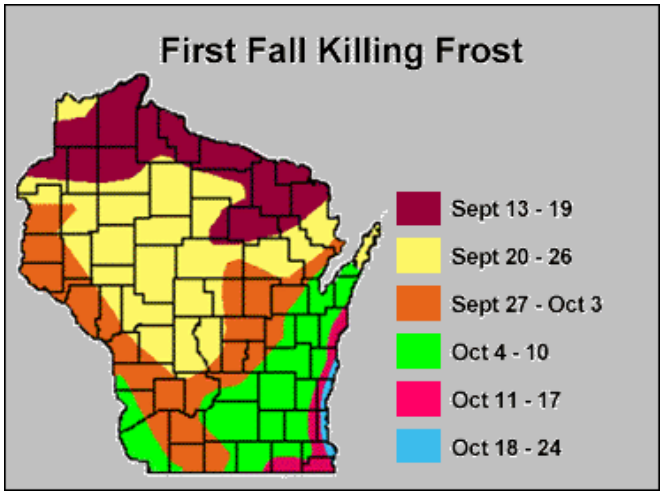
Cooperative Pest Survey Bulletin
Agricultural Resource Management
Bureau of Plant Industry
WI Department of Agriculture, Trade & Consumer Protection, PO Box 8911, Madison, WI 53708-8911 Phone: 1-800-462-2803 Fax: 608-224-4656 Web: Wisconsin.gov



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





WEATHER AND PESTS

Recent rains are slowing down harvest throughout much of the state, including potatoes and the last hay crop. Winter wheat planting is progressing.

CORN

European corn borer - The fall abundance survey is still in progress; therefore, summary information is not yet available for the entire state. We expect the survey to reach completion by the end of next week. Survey results and summary maps will be available in the November 15th edition of the Cooperative Pest Survey Bulletin.

For those who are unfamiliar with the European corn borer survey, it documents the *average number of larvae per 100 plants*, at 220 sites throughout the state. The number of sites selected per county is based on the acreage of grain corn planted. Survey results are used to assess both short- and long-term trends in European corn borer population dynamics, and can be used to forecast the population density of the first flight of moths next season. Survey data may also be useful in decision-making for growers considering planting a Bt corn hybrid in the upcoming season. Bt corn is effective in providing yield protection, but it is also more costly; therefore, the benefits of European corn borer management outweigh the costs only during years when infestations are heavy. At this time there is no way to predict

European Corn Borer Tunneling

with complete accuracy the level of infestation from season to season, but the results of this survey can give growers a general idea.

Although this survey may be of use in making management decisions, there is no substitute for scouting your own field(s). Growers who have not yet harvested their corn still have an opportunity to assess larval abundance. The survey procedure is relatively simple and requires less than 30 minutes per field. To begin, walk a minimum of 50 paces into the corn field. Starting with the first plant on the right, examine 25 consecutive plants for signs of infestation, such as characteristic leaf feeding injury, entrance/exit holes, or frass. Be sure to thoroughly check the plants from tip to base, in the ear, near the shank, etc. Record the number of plants infested out of the 25 examined. Next, dissect the last two infested plants for larvae. Begin at the tip of the plant or near the highest entrance/exit hole, and cut toward the base of the plant. Total the number of larvae found inside the two plants, divide that number by two (to find the average). Multiply the average by the total number of infested plants of the 25 examined, to determine the *average number of corn borer larvae per 100 plants*. For example, if 12 of the 25 plants show signs of infestation, and an average of 2 larvae are found within the two plants that were dissected, the average number of larvae per 100 plants would be 96 per 100 plants. A population exceeding 60 larvae per 100 plants is considered high.

FOREST, SHADE TREE, ORNAMENTALS AND TURF

Christmas tree inspections- Over 200 fields have been inspected so far. Significant finds include:

Gypsy moth egg masses- The distinctive, tan, fuzzy eggs of gypsy moth have been found surrounding a number of Christmas tree fields in Waushara Co. Fields with surrounding wood lots are more likely to have gypsy moth egg masses at their edges. To scout for egg masses, look near trees that this exotic pest prefers, such as oak or fruit trees, and look for the egg masses in bark cracks, on the underside of branches, and on the underside of equipment or deer stands. This pest is federally regulated, so keep an eye on the trees you ship and the areas surrounding your fields, even if inspectors didn't find any gypsy moth when they looked this autumn.

White pine weevil- A number of fields had more severe damage than we have seen for several years on all species of pine and spruce Christmas tree fields. The adult weevil lays its eggs in the terminal leader of the tree, and the larvae hatch and burrow down from the tip, killing up to four years of growth. Trees should be scouted in late spring. Prune and destroy all infested leaders before mid-July. Spray when pruning becomes unmanageable.

Balsam gall midge- This pest has been found in light amounts throughout its range in northern Wisconsin. Noteworthy is the fact that we found needle galls in several counties in central Wisconsin. These trees were likely infested by midges that had been transported on northern trees that were stored and dropped their needles near the now-infected trees.

Deep planting damage- Several fir trees were analyzed by the DATCP lab for suspected root rot, but results came back negative. Samples were taken from fields that had scattered dead trees. Generally when we see scattered dead firs and cannot find a reason for the death above ground, we suspect poor drainage and root rot. However, when digging for evidence of trunk or root damage, inspectors noted the root collars were buried well below the soil line, and even farther below the layer of needles and duff. Deep planting damage is most commonly seen on landscape trees, creating girdling roots and decline, but can cause problems anywhere.

White pine blister rust- This fungus continues to be the top cause of death among white pine Christmas trees. Some areas of the state have a higher prevalence of this fungus, which is mainly caused by the number of alternate hosts (gooseberry, currant, *Ribes spp*.) growing in the area. Of particular interest to inspectors this year were several white pine fields that had over 25% of the terminal or main leaders infected. It is more common to have tree branches infected near the base of the tree, where there is higher humidity, cooler temperatures and less air circulation. Terminal infection may have been the result of pruning tools spreading spores to new trees, and highlights the importance of keeping pruning tools clean. A can of Lysol spray works well to disinfect tools in the field, as does a spray bottle filled with a 10% bleach solution or alcohol. Shoots that are dying or have cankers or fruiting bodies should be removed, including at least several inches of healthy growth below the canker.

Spruce gall midge *(Mayetiola piceae)*- This small fly-like pest is causing damage to white spruce Christmas trees throughout northern Wisconsin. Damage can be widespread, affecting most of the trees in a field, and has been heavy in a few locations. This pest is one of the very few not noted in


Eastern Spruce Gall Adelgid damage


Spruce Gall Midge damage

the *Christmas Tree Pest Manual*, but there is a brief mention in *A Guide to Insect Injury of Conifers in the Lake States*. Look for small, gray, round bumps on new growth, along with curled, contorted twigs. In summer, tiny maggots can be found inside these bumps; small holes in each swelling indicate the insect has emerged in fall. Damage from this pest can look very similar to damage from the spruce gall adelgids.

Bronze birch borer – A severe infestation was found on crimson frost birch at a nursery in Washington Co.

Eastern spruce gall adelgid – Light to moderate numbers of galls were reported on Norway, white and Black Hills spruce at nurseries in Forest, Lincoln, Pierce and St. Croix Cos.

Fall webworm – Webs and feeding injury were very noticeable on black cherry and green ash at a nursery in Racine Co.

Gypsy moth- A gypsy moth infestation was detected in the southwest part of Watertown in Jefferson Co. Egg mass counts were high enough to expect moderate to heavy defoliation on approximately 60-90 acres. **(DNR)**

Imported willow leaf beetle – Moderate to heavy amounts of feeding damage were seen on weeping willow at a nursery in Kenosha Co.

Japanese beetle – Feeding damage was light to moderate but widespread on linden and red oak at nurseries in Dane, Kenosha and Milwaukee Cos.

Linden borer – Greenspire linden was being hit hard by linden borer at nurseries in Washington and Ozaukee Cos.

Northern pitch twig moth (pitch nodule maker) – Small numbers of nodules were noticed on Scotch pine at a nursery in Lincoln Co.

Pear slug – This sawfly pest was found in light to moderate numbers on cherry trees at a Douglas Co. nursery.

Pigeon tremex horntail (*Tremex columba*)- The City of Arcadia (Trempealeau Co.) has a problem with a horntail, the pigeon tremex. Horntails, also called woodwasps, are formidable looking insects that are distantly related to bees and wasps. Despite their large size, they don't sting and are not a threat to humans. They colonize dead and dying hardwoods, most commonly maple, birch and elm. In Arcadia, they are attacking stressed sugar maples in a park and city streets. Some of the trees have signs of a *sapwood rot* also, which may be transmitted by the insect. **Ichneumonid wasps,** common insect predators were also noted laying eggs in the trees. **(DNR)**

The Pigeon Tremex

http://entweb.clemson.edu/museum/webonly/local/lmisc/lmisc4.htm

Redheaded flea beetle – Light amounts of damage were recorded from weigela at a nursery in Washington Co.

Spruce gall midge – Small amounts of damage were found on Colorado and white spruce at a nursery in Lincoln Co.

Spruce needleminer – White spruce at a Pierce Co. nursery had moderate damage from this pest.

Zimmerman moth – A Lincoln Co. nursery had light amounts of damage on their Scotch pine.

Pine needle scale – Light amounts of scale were observed on Scotch pine at nursery in St. Croix Co. and on mugo pine at a nursery in Kenosha Co.

Alleghany mound ant - These large mound-forming ants are usually not a problem for stock in wide areas of fields but can do isolated damage to trees when they build mounds close to the trunk. The mound was found in a field in Ozaukee Co. near pagoda dogwood.

Annosum root rot- This fungus was recently confirmed affecting red pine in Trempealeau and Buffalo Cos. There are now eight counties in Wisconsin confirmed with annosum root rot. The other counties are Adams, Iowa, La Crosse, Marquette, Richland and Sauk. **(DNR)**

Apple scab – This disease was found on apples and crabapples in light to moderate amounts in Chippewa, Dane, Door, Douglas, Kenosha, Milwaukee, Ozaukee, Rusk and Waukesha Cos.

Asteroma leaf spot - Linden had light to moderate amounts in Dane, Kenosha, Milwaukee, Ozaukee and Washington Co. nurseries.

Bacterial leaf spot – Leaf spotting on magnolia and Canada red cherry was found in light amounts at nurseries in Door and Kenosha Cos.

Black spot - This common problem was found in Dane, Door, Milwaukee, Washington and Waukesha Co. nurseries in light to moderate amounts. It can be helpful to clean up leaves from around plants which had black spot this season.

Cedar-apple rust – This foliar disease was reported on hawthorn in trace to heavy amounts in Kenosha, Ozaukee, Washington and Waukesha Co. nurseries.

Cyclaneusma needle blight - This blight was found on Austrian pine in light amounts in an Ozaukee Co. nursery.

Cytospora canker – Cankers were found on Colorado spruce and mountian ash in light to heavy amounts in Kenosha and Milwaukee Cos.

Dothistroma needle blight - Austrian pine had light to moderate amounts at nurseries in Dane, Kenosha, Ozaukee, Washington and Waukesha Cos.

Entomosporium leaf spot – This fungal disease commonly starts in mid- to late-summer and continues to get worse as the season progresses. This was found on serviceberry in moderate to heavy amounts in an Ozaukee Co. nursery. It can also be found on mountain ash and cotoneaster.

Frog-eye leaf spot – This somewhat unusual leaf spot was observed in a nursery in Washington Co. on crabapples in light amounts. This leaf spot is characterized by pale to reddish-bordered round spots on the leaves. The same fungus that causes frog-eye leaf spot also causes black rot, a fruit decay disease. Interestingly, though, the fungus does not appear to spread from the infected leaves to fruit.

Gnomonia leaf spot – This fungal disease was observed in a nursery in Milwaukee Co. on hickory in moderate levels.

Lophodermium needlecast - This needlecast, common on Scotch pine, was found in light to moderate amounts in a Kenosha Co. nursery.

Mystery spruce disease – This disorder was found on Colorado spruce in light to moderate amounts at nurseries in Clark, Lincoln, Ozaukee, Pierce and Washington Cos.

Pestalotiopsis - Aborvitae at a nursery in Ozaukee Co. had light amounts.

Phomopsis tip blight - Moderate amounts of this blight were found on junipers and arborvitae in Waukesha and Ozaukee Co. nurseries in moderate amounts.

Phyllosticta leaf spot – Moderate amounts were found on hydrangea and red maple in Chippewa and Kenosha Co. nurseries.

Quince rust - Hawthorns had gall-like growths forming on twigs in Douglas, Kenosha, Ozaukee and Washington Co. nurseries.

Red spot - Peonies had moderate to heavy amounts in Door and Waukesha Co. nurseries.

Rhizosphaera needlecast – Rhizosphaera can be a common disease in spruce when surrounding grass and weeds are not mowed or controlled and air movement is restricted. It was found on Colorado, white and Black Hills spruce in light to moderate amounts in Clark, Forest, Lincoln, Pierce and

Washington Co. nurseries.

Septoria leaf spot - This very common leaf spot was found on many types of dogwood in light to heavy amounts in Chippewa, Dane, Kenosha, Milwaukee, Rusk, Washington, and Waukesha Co**.** nurseries.

Spruce needle rust - A chrysomyxa rust was found on Colorado spruce in Lincoln and Forest Cos. The fungus was not fruiting.

Tar spot – This fungal disease begins to show up in late summer and gets worst until the leaves drop. Tar spot overwinters in leaf litter; therefore leaves should be removed from the area. It was found on silver maple and autumn blaze maple in light to moderate amounts in Chippewa, Dane, Door, Kenosha, Ozaukee and Washington Co. nurseries.

White pine blister rust - Light to moderate amounts were noted on white pine in Lincoln, Pierce, and St. Croix Co. nurseries.

STATE/ FEDERAL PROGRAMS

Gypsy moth trapping program - Trappers have completed taking down traps for 2002. All counties are complete and we are waiting for final data to come in for Bayfield and Iron County. Trappers took down 25,093 (99%) of the set total and caught a record 585,265 gypsy moths. This does not include cooperator data. Missing traps account for the 1% of the traps not taken down.

Six counties had no gypsy moth catches and they are: Barron, Burnett, Pepin, Pierce, Polk, and St. Croix.

Counties with the highest totals are: Brown 16,042; Door 48,110; Florence 14,304; Forest 15,595; Kewaunee 16,528; Langlade 13,619; Manitowoc 21,749; Marinette 130,002; Menominee 13,442; Oconto 63,568; Outagamie 14,238; Ozaukee 13,368; Portage 14,942; Shawano 14,642; Sheboygan 22,637; Washington 19,951; Waukesha 26,511; Waupaca 22,333; and Waushara 13,066.

A final map with official totals, including cooperator totals, will be in the next pest bulletin.

Fall egg mass surveyors will have training in Wausau on October 16. Surveys will start on Monday, October 21. Again, we appreciate landowner permission to survey private properties. Surveyors are instructed to contact landowners before surveying but if no one is home, a "Notice of Egg Mass Survey" is left at the landowner's home.

For more information on the gypsy moth trapping program, please call our hotline at 1-800-642-MOTH or visit our website at http://datcp.state.wi.us and type "gypsy moth" in the search box.

Proposed rule change for ATCP 21 - The State of Wisconsin Department of Agriculture, Trade and Consumer Protection announces that it will hold public hearings on a proposed rule to repeal ATCP 21.05(3)(c); to renumber ATCP 21.01(10) to (15); to repeal and recreate ATCP 21.05(3)(a) and (b) and to create ATCP 21.01(9) and (10) and ATCP 21.16; relating to plant pests and certification and service fees. The department will hold two hearings at the time and places shown below. The department invites the public to attend the hearings and comment on the proposed rule. Following the public hearing, the hearing record will remain open until December 2, 2002, for additional written comments.

You may obtain a free copy of this rule by contacting the Wisconsin Department of Agriculture, Trade and Consumer Protection, Division of Agricultural Resource Management, 2811 Agriculture Drive, P.O. Box 8911, Madison WI 53708, or by calling (608) 224-4574. Copies will also be available at the hearings. You can also go to http://datcp.state.wi.us to get a copy of the rule proposal.

Hearing impaired persons may request an interpreter for these hearings. Please make reservations for a hearing interpreter by October 22, 2002, by contacting Paula Noel, Division of Agricultural Resource Management, P.O. Box 8911, Madison, WI 53708-8911, telephone (608) 224-4574 or email paula.noel@datcp.state.wi.us. Alternatively, you may contact the Department TDD at (608) 224-5058. Handicap access is available at the hearings.

Hearings are scheduled at:

Tuesday, October 29, 2002, 1:00 p.m. until 3:00 p.m.
Wisconsin Department of Agriculture, Trade and Consumer Protection
Room 266
2811 Agriculture Drive
Madison, WI 53718
Handicapped accessible

Wednesday, October 30, 2002, 1:00 p.m. until 3:00 p.m.
Wisconsin Department of Natural Resources Service Center
5301 Rib Mountain Road
Wausau, WI 54401
Handicapped accessible

Fees for Plant Inspection and Certification

Under the current fee formula, DATCP charges for mileage (32.5¢ per mile), food and lodging costs, plus $20 per hour for staff time. There is a minimum fee of $20 per inspection. Because most inspectors are based in Madison, charges increase with distance from Madison. DATCP also charges a fee of $15 per certificate issued. Current fees do *not* cover indirect costs related to general pest surveys, trapping and testing, although those activities provide important information for the certification process.

This rule establishes a new "flat" fee of $50 for each inspection *certificate* that it issues. There will be no other charge for inspection, travel, food or lodging costs (except for field inspections of crops). The flat fee will cover these costs, as well as a portion of DATCP's indirect costs for pest surveys, pest trapping and laboratory analysis. The flat fee is expected to generate approximately $30,000 in additional revenues for the program as a whole.

This rule establishes a lower fee of $15 for certificates that merely certify the identity or origin of plants or plant materials, without certifying that they are disease-free or pest-free. This rule maintains the current fee of $15 for ginseng shipment certificates issued under s. 94.50(3), Stats.

Hemlock Woolly Adelgid; Import Controls

DATCP regulates the movement of plant pests under s. 94.01(1), Stats. Currently, the states of Alaska, California, Oregon and Washington, and portions of 13 other states, are infested with hemlock woolly adelgid. Hemlock woolly adelgid is a serious pest that kills native and ornamental hemlock trees, an important Wisconsin resource. This rule prohibits imports of the following items from infested areas identified in the rule:

- Hemlock seedlings or nursery stock.
- Hemlock logs or lumber with bark.
- Uncomposted hemlock chips with bark.
- Uncomposted hemlock bark.

This prohibition does not apply if any of the following apply:

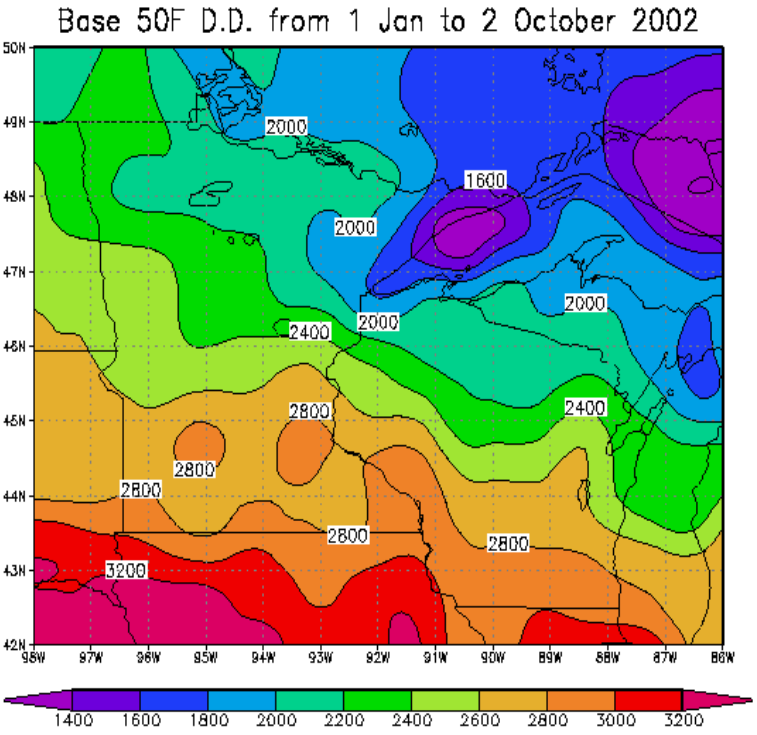
- A pest control official in the state of origin inspects the imported items and certifies any of the following in a phytosanitary certificate that accompanies the import shipment:
  - That the items originate from non-infested premises and have not been exposed to hemlock woolly adelgid.
  - That the items were found, at the time of inspection, to be free of hemlock woolly adelgid.
  - That the items have been effectively treated to destroy hemlock woolly adelgid. The phytosanitary certificate shall specify the pesticide or other treatment used.
  - That the items are produced, processed, stored, handled or used under conditions, described in the phytosanitary certificate, that effectively preclude the transmission of hemlock woolly adelgid.
- The items are imported under a written agreement between the importer and DATCP. DATCP may cancel the agreement at any time. The agreement must specify import terms and conditions including:
  - The name and address of the importer and import recipient.
  - The proposed source and destination of each import shipment.
  - The proposed import dates or time period.
  - The items to be imported in each proposed shipment.
  - The proposed size and frequency of import shipments.
  - The proposed method of import.
  - Required import conditions that will, in the department's opinion, effectively prevent the spread of hemlock woolly adelgid.

Website of the Week:

http://maize.agron.iastate.edu/

The Maize Page

A mindboggling amount of information on corn—from gene maps to The Corn Palace, and seemingly everything in between.



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