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Mimosa Webworm

Mimosa webworm is susceptible to control at this time in southern Illinois. Spraying the foliage of attacked trees with Bacillus thuringiensis kurstaki (Dipel, Thuricide), spinosad (Conserve), or labeled pyrethroid insecticide at this time should provide control. Treatment will be successful in central and northern Illinois in about two weeks.

Mimosa webworm heavily attacks silktree or mimosa, *Albizia julibrissin*, in southern Illinois. It is common for much of the foliage of silktrees to be brown and heavily webbed together in late summer. It also attacks honey locust throughout the state, but is only occasionally numerous enough to cause obvious aesthetic damage. When numerous, the foliage of a third or more of honey locusts will be brown in late summer.

Mimosa webworm has two generations per year in Illinois. Larvae and pupae overwinter in bark crevices and other protected locations, emerging as adult moths in spring. Larvae are greenish or brownish, slender caterpillars slightly more than one-half-inch long when fully grown. They wiggle vigorously and crawl quickly when disturbed. They web leaflets together, feeding on the webbed leaflets, causing them to turn brown. Mature larvae pupate and emerge as moths to lay a second generation of eggs on leaves damaged by the first generation larvae. This second generation is colonial, with the numerous larvae webbing entire compound leaves together, causing the damage to be very obvious.

Controlling the first generation larvae usually prevents the large, damaging, second generation larvae. Scout by looking for small numbers of leaflets webbed together on silktree and two to three leaflets webbed together on honey locust. Large numbers of these webbed leaflets containing first generation larvae warrant control. In the northern two-thirds of the state, trees close to buildings are more likely to be attacked. Larvae that crawl under siding and shingles of heated buildings are more likely to survive cold winters. In southern Illinois, larvae usually survive the winter without finding warmer sites. (*Phil Nixon*)

Honey Bee Health Report by USDA and EPA

The U.S. Department of Agriculture (USDA) and the U.S. Environmental Protection Agency (EPA) released a comprehensive scientific report on honey bee health on May 2, 2013. The report states that there are multiple factors playing a role in honey bee colony declines, including parasites and disease, genetics, poor nutrition and pesticide exposure.

The two agencies jointly released the report by a National Stakeholders Conference on Honey Bee Health that convened in October, 2012. The conference was developed by federal researchers and managers, along with Pennsylvania State University. It was convened to synthesize the current state of knowledge regarding the primary factors that scientists believe have the greatest impact on managed bee health.

Key findings include:
Parasites and Disease Risks:
The parasitic Varroa mite is recognized as the major factor underlying honey bee colony loss in the U.S. and other countries. There is widespread resistance to the chemicals beekeepers use to control mites within the hive. New virus species have been found in the U.S. and several of these have been associated with Colony Collapse Disorder (CCD).

Increased Genetic Diversity Needed:
U.S. honeybee colonies need increased genetic diversity. Genetic variation improves bees thermoregulation (the ability to keep body temperature steady even if the surrounding environment is different), disease resistance and worker productivity. Honey bee breeding should emphasize traits such as hygienic behavior that confer improved resistance to Varroa mites and diseases (such as American foulbrood).

Poor Nutrition:
Nutrition has a major impact on individual bee and colony longevity. A nutrition-poor diet can make bees more susceptible to harm from disease and parasites. Bees need better forage and a variety of plants to support colony health. Federal and state partners should consider actions affecting land management to maximize available nutritional forage to promote and enhance good bee health and to protect bees by keeping them away from pesticide-treated fields.

Improved Collaboration and Information Sharing:
Best Management Practices associated with bees and pesticide use exist but are not widely or systematically followed by members of the crop-producing industry. There is a need for informed and coordinated communication between growers and beekeepers and effective collaboration between stakeholders on practices to protect bees from pesticides. Beekeepers emphasized the need for accurate and timely bee kill incident reporting, monitoring, and enforcement.

Additional Research on Pesticide Risks:
The most pressing pesticide research questions relate to determining actual pesticide exposures and effects of pesticides to bees in the field, and the potential for impacts on bee health and productivity of whole honey bee colonies.

The report will provide important input to the Colony Collapse Disorder Steering Committee led by the USDA, EPA, and the National Agricultural Statistics Service (NASS). The Colony Collapse Steering Committee was formed in response to a sudden and widespread disappearance of adult honey bees from beehives, which first occurred in 2006. The Committee will consider the report's recommendations and update the CCD Action Plan which will outline major priorities to be addressed in the next 5-10 years. This will serve as a reference document for policy makers, legislators and the public and will help

coordinate the federal strategy in response to honey bee losses.

To view the report, which represents the consensus of the scientific community studying honey bees, visit: http://www.usda.gov/documents/ReportHoneyBeeHealth.pdf. (*Modified by Phil Nixon from an EPA and USDA Press Release*)

Taphrina Diseases

Taphrina is a fungal genus within Ascomycetes that infects numerous ornamental and fruit trees. *Taphrina* pathogens thrive in cool, wet weather, and depending on the plant species, can cause symptoms such as leaf curls, blisters, stem dieback, and fruit deformation. *Taphrina* spp. will overwinter in a yeast-like stage on the bark, near buds. If weather conditions are ideal in the spring, as they have been this year, these fungal pathogens will quickly infect leaves as the buds break. The infection will progress and eventually cause curling or blister-like symptoms. Some of the commonly seen *Taphrina* spp. can cause leaf drop, but as the weather warms and dries, the tree should refoliate. This new flush of leaves should be immune to repeat infections. *Taphrina* spp. can lay dormant for several years until the perfect weather conditions occur to induce a heavy infection. *Taphrina* is also interesting in the fact that each of its species is host specific. Below are some commonly seen *Taphrina* diseases in Illinois.

In addition to these three diseases, we have also been observing *Taphrina* leaf blister of maple, which is fairly, uncommon in Illinois. For more information on *Taphrina* leaf blister, you can refer to the previous Home, Yard, and Garden Newsletter article: http://hyg.ipm.illinois.edu/article.php?id=473

Controlling *Taphrina* infection on trees is all about preparation and timing. Choosing dwarf varieties and good pruning practice can be helpful, as it is difficult to provide complete spray protection to large dense trees. Applying fungicide at the proper times, such as just before bud break, can provide some much needed protection from *Taphrina* diseases. However, once infection takes place, this fungus can no longer be controlled. Some other recommended strategies are applying nitrogen to promote new leaf growth, watering to reduce drought stress, and thinning fruit to reduce demand on remaining leaves. Although these diseases will cause temporary unsightliness and yield loss, the good news is these *Taphrina* diseases mentioned above are not known to cause tree death. (*Stephanie Porter and Nicholas Prudhomme*)

Modified Growing Degree Days (Base 50°F, March 1 through May 30)

Station Location	Actual Temp.	Historical Average (11 year)	One-Week Projection	Two-Week Projection
Freeport	465	447	556	675
St. Charles	484	425	568	679
DeKalb	489	492	587	711
Monmouth	537	546	639	767
Peoria	570	583	675	807
Champaign	614	597	725	863
Springfield	652	666	770	913
Brownstown	666	727	789	937
Belleville	705	760	830	971
Rend Lake	774	821	907	1063
Carbondale	763	777	890	1038
Dixon Springs	773	836	904	1056

Insect development is temperature dependent. We can use degree days to help predict insect emergence and activity. Home, Yard, and Garden readers can use the links below with the degree day accumulations above to determine what insect pests could be active in their area. Throughout the state, degree days accumulations have reached levels for increased activity of many borers and beetles.

GDD of Landscape Pests

GDD of Conifer Pests

Degree day accumulations calculated using the Illinois IPM Degree-Day Calculator (a project by the University of Illinois Department of Crop Sciences and the Illinois Water Survey). (*Kelly Estes*)