

Monmouth County Shade Tree



VOLUME 2 ISSUE I

WINTER/SPRING 2008

Special Points of Interest:

- Annual Spring Forum
- 2008 Gypsy Moth Situation
- Tree City USA Recognition
- Frequently asked questions about trees
- Pest / Plant Management Information

Monmouth County Shade Tree Commission's Annual Spring Forum Wednesday, March 26, 2008 6:45 pm Conference Room 4000 Kozloski Road, Freehold, NJ

New Jersey Dept of Agriculture "Gypsy Moth Spray Program for Monmouth County" Joseph Zoltowski, Chief, Bureau of Plant, Pest & Disease Control, State of New Jersey Department of Agriculture-will give an update and presentation of the State's overall program, expected trends, and spray blocks in Monmouth County for 2008.

Monmouth County's Gypsy Moth Suppression Program for Communities

Brian Gosnell, Monmouth County Helicopter Pilot & Gypsy Moth Coordinator-will give an update and presentation of the specific spray blocks in Monmouth County Shade Tree Commission Suppression Program for 2008.

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Pest Problems Heading Our Way-What to Expect and How to Prepare

Richard Obal, County Agricultural Agent, Rutgers Cooperative Research & Extension-will discuss new invasive pests heading to New Jersey. He will describe strategies to prepare for this eventuality and what steps we need to take to minimize the impact.

For further information and registration form please call (732) 431-7903.

2008 Gypsy Moth Situation

The 2008 Gypsy Moth season is rapidly approaching us and we are ready. The Monmouth County Shade Tree Commission Gypsy Moth Suppression Team has completed the survey, egg mass counts, identified target areas for treatment, and processed all the paperwork necessary, and we are on schedule.

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Monmouth County Recognized as Tree City USA

The Monmouth County Shade Tree Commission had applied for Tree City USA status in 2006 based upon the criteria established by the National Arbor Day Foundation. On April 5th, 2007, the County was awarded TREE CITY USA designation and now stands among the elite. It is recognized that we are only the 17th County in the country out of 3100 Counties to be awarded this prestigious designation. We are positioned as 6th overall in population and if you consider Baltimore County adds the city population to its total, that makes us 5th in the country. For more information visit www.arborday.org

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This year's egg mass count has jumped significantly from 2007 primarily due to a population cycle upswing. Despite our best efforts of suppression and utilizing every available tactic to maximize the effectiveness, we were unable to get more than 50-65% control. The best efforts are tempered by weather, an extended hatching period, and pesticide options, all of which play a role in how effective the treatment will be.

The State defoliation survey for 2006 had 125,743 acres designated and in Monmouth County 9,140 acres were identified. The 2007 defoliation survey now has the State total at more than 320,000 acres and Monmouth at 13,988 acres, a 65% increase respectively. This is a significant increase in acreage due to a variety of factors as listed above. However, the numbers would be much higher if we neglected the program and far more residents and communities would be forced to seek alternative treatments from the private sector at a greater risk, exposure, and cost. Although the Gypsy Moth treatment program receives a fair amount of attention, we are aware of and monitoring other issues involving invasive pests and will be ready should the need arrive. Monmouth County leads the State in the care for its tree resource and will continue to provide the service to our residents as they expect and maintain the County as the most livable County in the region.

Depending on the weather, spraying should begin between the last week of April and the first or second week of May and continue until completed or deemed ineffective. Starting the program depends on the leaf break on the trees, so the material will be held in place for the caterpillars to ingest. Most treatments will be done early in the morning about 5-5:30 am up to school shutdown time, and then resume until treatment schedule has been met.

Any questions should be directed to the Shade Tree office @ 732-431-7903.

Frequent Asked Tree Questions

What type of tree should I buy?

A: Tree selection is one of the most important investment decisions for a homeowner. First, examine the location conditions of where you want your tree to be planted. Take the following into consideration before selecting the tree species you want:

- Amount of space
- Clearance from overhead and underground utilities
- Weather conditions
- Tree functions you desire-such as color, fruit, flowering, shape or desired use (privacy)
- Exposure to sun and wind
- The quality

Then, utilize the information you have gathered and select the tree species that works best with the conditions. For assistance, contact your local CTE, ISA Certified Arborist, tree care professional, or garden center to plant the right tree in the right place.

How should I plant my tree?

A: Location conditions are extremely important and vital to a tree's health. Be sure to examine the tree location conditions and follow these steps when planting your new tree:

- Dig a shallow, broad hole: only as deep at the root ball, but up to 3x's as wide in diameter.
- Identify the trunk flare: this is where the roots spread at the base of the tree.
This should be partly visible after planting.
- Place the tree at the proper height.
- Straighten the tree in the hole.
- Fill hole, gently but firmly and water to eliminate air pockets.
- Stake the tree, if necessary.
- Mulch the base of the tree.
- Maintain with follow-up care and watering at appropriate intervals.

Back To Basics – Wood Burning for Heat

Wood heating -- with its big savings and bigger pollution -- is making a comeback in North Jersey as homeowners cope with the soaring costs of other fuels. In 2006, use of wood stoves in the counties of Bergen, Hudson, Morris, Passaic and Sussex rose by 25 percent from 2000, but to only seven out of every 10,000 homes, according to census surveys. Wood and stove retailers, however, note that there's clearly something more afoot this cold season.

That might have to do with the fact that good burning wood will, in some cases, produce the same amount of heat as other fuels for less than half the cost.

Wood prices have remained relatively stable in recent years and supplies can even be obtained for free. Meanwhile, the cost of home heating oil alone has jumped 117 percent since 2000, according to federal records. But wood smoke pollutes at dozens of times the intensity of other heating options, scientists say, with ash residue and wafted smoke particles affecting air quality and water supplies. The industry continues in its effort to get consumers to switch to cleaner-burning wood stove technology. But until then, the dirtiness of wood burning has led some parts of the country to heavily regulate it, with temporary bans in times of bad air quality.

“New Jersey has no such restrictions on the use of fireplaces or indoor stoves”, said Karen Hershey, spokeswoman for the state Department of Environmental Protection. Stove users can cut up dead fallen timber for a small permit fee at five state parks or forests, including Stokes State Forest and High Point State Park in Sussex County.

A cord is a pile of wood 8-by-4-by-4-feet in size -- or 128 cubic feet. That fills about two full-sized pickup trucks. Retailers say it could heat a home for the winter. The rising interest also applies to wood pellets, made of sawdust.

Installing wood heating isn't cheap. The cost can run from \$3,000 to \$5,000 for a pellet or wood stove, but consumers would recoup that cost in a few years of wood heating. Cost savings aside, scientists still point to the environmental price of wood heating.

The typical wood stove releases about 354 times more particles than an oil furnace for every million BTUs, according to the Federal Environmental Protection Agency. BTUs, or British thermal units, are a measure of heat energy. Cleaner stoves that follow federal guidelines still release 108 times more than their oil equivalent, while wood pellet stoves are the lowest at about 38 times.

For a better burn and maximum heating, the industry has been pushing for consumers to replace older fireplaces and stoves. It's better for you and your home to have the new technology, and it's better for your community.

Changing heating devices can cut particulate emissions by a significant amount. For now, though, concerns about pollution don't seem to be affecting the renewing popularity of wood heat.

Chips to Fuel The Race for Waste Warrenville, Ill. Here in a cluster of tiny laboratories, in a nondescript one-story office building, in a cookie-cutter industrial park in suburban Chicago, scientists and engineers officially partnered with General Motors with one of the most feasible solutions yet to the wrenching problem of global dependence on oil for gasoline. Its called cellulosic ethanol. It is created by proprietary strains of bacteria that convert farm waste, wood chips, old tires, landfill plastic and a whole bunch of other organic materials into ethanol. The process was licensed and is being commercialized by a startup called Coskata, Inc.

Specifically, the promise is that Coskata plans to produce enough cellulosic ethanol here by later this year to begin fueling the GM test fleet at the Milford (Mich.) Proving Grounds. And if that works, Coskata projects that it could be running its first commercial-scale plant, producing 50 million to 100 million gallons of ethanol annually, by 2011, including the two years it will take to build the plant.

Coskata executives believe that their process can be a huge player in the energy future because of several fundamental advantages of Cellulosic vs. Corn. Waste is the easiest source to procure for ethanol output and doesn't compete for food supplies as using corn does. The entire production and distribution cycle can be local, making cellulosic ethanol a potential energy contributor nearly anywhere on the globe. Most important, Coskata said its process can produce cellulosic ethanol for less than \$1 a gallon, about half of today's cost of making gasoline. Some outsiders calculate that its cost would come out to about \$1.30 a gallon on an energy-equivalent basis to gasoline and could debut in the marketplace at a retail price of around \$2 a gallon.

Cellulosic ethanol has significantly higher octane content than gasoline, which boosts engine efficiency. It reduces carbon-dioxide emissions by up to 84% compared with gasoline, according to a well-to-wheel analysis by Argonne National Laboratory, and it generates up to 7.7 times the energy used in its production process, a much better ratio than corn-ethanol production. It also uses two or three times less water in production than the best technologies today.

What's more, its use in vehicles doesn't require exotic new power-trains or complicated engineering innovations, as plug-in hybrids or fuel-cell vehicles do; nor does it depend on the planning and construction of a complete, mammoth new fuel-distribution infrastructure from scratch. Cellulosic ethanol can power any existing flexible-fuel vehicle, and GM alone has 3.5 million of those on the road around the world and is producing more than one million new flexible-fuel vehicles a year. It is the only feedstock source that has the true potential to displace oil.

In the wake of \$3-a-gallon U.S. gasoline, corn-based ethanol finally gained a market and took advantage of an existing resource base. But recently its prospects as a panacea have come under fire because producing ethanol from corn is relatively inefficient. Not many years ago, the energy bounce you got from producing corn ethanol was negative; its only a little bit positive now. But the energy bounce you get from cellulosic is very high. Its a no-brainer.

Moreover, the energy demand for corn began to put pressure under corn prices just as the prospects for significant food scarcities around the globe have become more ominous. Not only is cellulosic ethanol extremely versatile in the variety of feed-stocks it can accommodate, but Coskata can produce about 100 gallons of it from just a ton of dry material.

At the same time, GM and other automakers have been embracing E85 fuel (85% ethanol, 15% gasoline) as a major means of diversifying the propulsion sources for their vehicle fleets. GM has committed to doubling North American production of flex-fuel vehicles from 400,000 to 800,000 by 2010 and to make half of its vehicles flex-fuel capable by 2012. In the 2007 model year, GM produced 14 flex-fuel models totaling 760,000 vehicles. GM also has helped to open 300 E85 refueling stations in 15 states over the last two years.

In any given market consumers need to see availability of a given fuel at about 6% of surrounding filling stations for them to feel its all around them. That's the level at which Americans became comfortable with diesel fuel as a mainstream source several years ago, and now diesel is available at about 40% of U.S. gas stations.

Consumers might be confused or put off by the fact that a gallon of ethanol yields about 25% less mileage than gasoline, even though ethanol is expected to remain far less expensive on an energy-equivalent basis. And even a decade or so from now, its expected that full-out production of cellulosic ethanol still will provide only a fraction of the solution to Americas oil dependence. The nations annual oil consumption is about 140 billion gallons now, and that can amount easily rise to 180 billion gallons by 2030.

Plant and Integrated Pest Management

Diagnosis

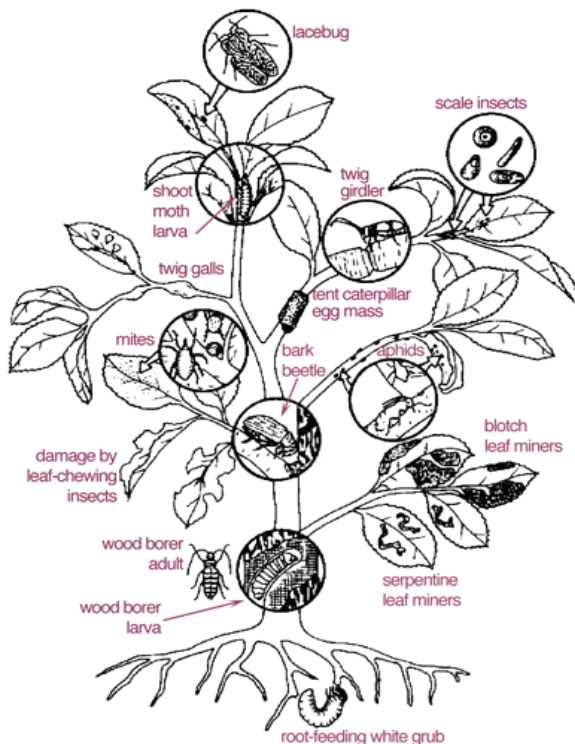
Correct diagnosis of plant health problems requires a careful examination of the situation.

Accurately identify the plant. Because many insects and diseases are plant-specific, this information can quickly limit the number of suspected diseases and disorders.

Look for a pattern of abnormality. It may be helpful to compare the affected plant with other plants on the site, especially those of the same species. Differences in color or growth may present clues as to the source of the problem. Non-uniform damage patterns may indicate insects or diseases. Uniform damage over a large area (perhaps several plant species) usually indicates disorders caused by such factors as physical injury, poor drainage, or weather.

Carefully examine the landscape. The history of the property and adjacent land may reveal many problems. The number of species affected may also help distinguish between infectious pathogens that are more plant-specific as compared to chemical or environmental factors that affect many different species. Most living pathogens take a relatively long time to spread throughout an area, so if a large percentage of plants becomes diseased virtually overnight, a pathogen is probably not involved.

Examine the roots. Note their color: brown or black roots may signal problems. Brown roots often indicate dry soil conditions or the presence of toxic chemicals. Black roots usually reflect overly wet soil or the presence of root-rotting organisms.



Check the trunk and branches. Examine the trunk thoroughly for wounds because they provide entrances for pathogens and wood-rotting organisms. Wounds can be caused by weather, fire, lawn mowers, string trimmers, and rodents, as well as a variety of other environmental and mechanical factors. Large defects may indicate a potentially hazardous tree.

Note the position and appearance of affected leaves. Dead leaves at the top of the tree are usually the result of environmental or mechanical root stress. Twisted or curled leaves may indicate viral infection, insect feeding, or exposure to herbicides. The size and color of the foliage may tell a great deal about the plant's condition. Make note of these and any other abnormalities.

Final note: A known history of the care for your trees, such as fertilizing, watering, pruning and even the construction at your neighbors house may have an effect on your trees. All of these factors have weight in diagnosing tree problems as well offering solutions.

Avoiding Tree Damage During Construction

As cities and suburbs expand, wooded lands are being developed into commercial and residential sites. Homes are constructed in the midst of trees to take advantage of the aesthetic and environmental value of the wooded lots. Wooded properties can be worth as much as 20 percent more than those without trees, and people value the opportunity to live among trees.

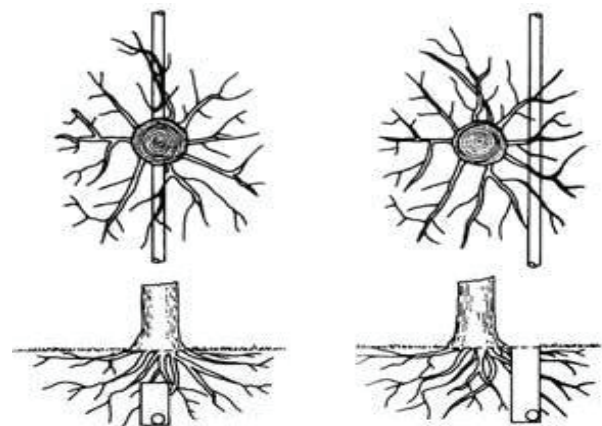
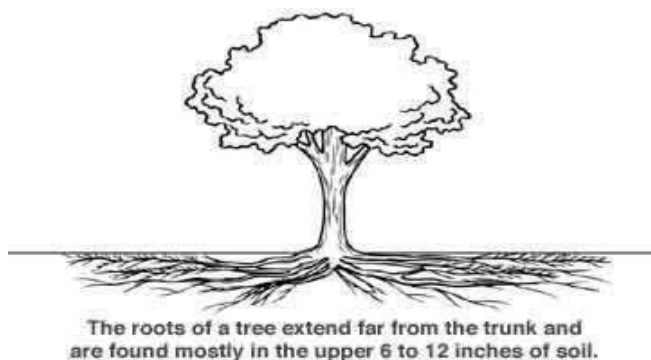
Unfortunately, the processes involved with construction can be deadly to nearby trees. Unless the damage is extreme, the trees may not die immediately but could decline over several years. With this delay in symptom development, you may not associate the loss of the tree with the construction.

It is possible to preserve trees on building sites if the right measures are taken. The most important step is to hire a professional arborist during the planning stage. An arborist can help you decide which trees can be saved and can work with the builder to protect the trees throughout each construction phase.

How Trees Are Damaged During Construction

Physical Injury to Trunk and Crown. Construction equipment can injure the aboveground portion of a tree by breaking branches, tearing the bark, and wounding the trunk. These injuries are permanent and, if extensive, can be fatal.

Cutting of Roots. The digging and trenching that are necessary to construct a house and install underground utilities will likely sever a portion of the roots of many trees in the area. It is easy to appreciate the potential for damage if you understand where roots grow. The roots of a tree are found mostly in the upper 6 to 12 inches of the soil. In a mature tree, the roots extend far from the trunk. In fact, roots typically are found growing a distance of one to three times the height of the tree. The amount of damage a tree



can suffer from root loss depends, in part, on how close to the tree the cut is made. Severing one major root can cause the loss of 5 to 20 percent of the root system.

Another problem that may result from root loss caused by digging and trenching is that the potential for the trees to fall over is increased. The roots play a critical role in anchoring a tree. If the major support roots are cut on one side of a tree, the tree may fall or blow over.

Less damage is done to tree roots if utilities are tunneled under a tree rather than across the root system.

SPECIAL NOTE*

Monmouth County's Arbor Day will be held in **Marlboro** at: April 24th at 10:00a.m.
Roberts Elementary School on Menzel Ln.

The State's Arbor Day will be celebrated on April 25, 2008
at Heavenly Farms in East Brunswick

Monmouth County Annual Spring Forum

visit www.visitmonmouth.com Shade Tree Department for more information

2008 Garden State Tree Conference

On March 6 and 7, 2008

Rutgers University, New Brunswick, NJ

for information visit www.isa-arbor.com/certification

Conference Center information is available online at:

<http://cookcampuscenter.rutgers.edu/>

2008 NJ Society of Certified Tree Experts Educational Seminars

April 12, Tree Biology - Rutgers Cook College

May 15, Tree Identification – Deep Cut Park

June 7, Insect & Diseases - Lab Samples Tatum Park

Contact Monmouth County Shade Tree office for information 732-431-7903

Committee for the Advancement of Arboriculture

2 week Tree Climbing Course - Basic & Advanced Levels – FREC Jackson

April 29 & 30, May 6 & 7, 13 & 14, 20 & 21, 27 & 28.

Chain Saw Safety May 6 FREC Jackson

CPR/First Aid May 13, FREC Jackson

Electrical Hazard May 20, FREC Jackson

Contact the CAA office for information @ 732-833-0325

Partnership with Friends of the Park – The Shade Tree Commission has recently joined with the “Friends of the Parks” organization as an affiliated arboretum chapter. This will allow the commission to collect funds for various uses at the arboretum in order to relieve the burden of diminished funding from tax related sources. Funds will be generated from various sources such as donations, fees, and penalties. Once funding is started, we should see immediate results in the overdue improvements to the facility. If you wish to be a part of this effort, please contact the Shade Tree office or send a check to “Friends” and note on the bottom “ARBORETUM ACCOUNT” and it will be used for arboretum purposes only. Special recognition may be noted to those who desire to be recognized as contributors as appropriate and approved by the Director of the Arboretum.

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Monmouth County Receives Cool City Grant Tree City USA

The installation of 96 trees along the Kozlowski Rd. corridor through a New Jersey Cool City's Forestry Grant, has put the recognition and respect of Monmouth County and its Shade Tree Division in the forefront of many urban and rural areas as a leader, and is setting a precedent for the future times to come. A proclamation was set forth by the Freeholders to name April 27, 2007 as the official Arbor Day for Monmouth County.



Monmouth County Shade Tree Newsletter

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