BACKYARD TREE FARM

Backyard Tree Farm Newsletter

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Backyard Tree Farm Program for
Individuals Interested in Natural Resources Conservation

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Wet Spring – Pests and Fungus into the Fall

By Suzanne Stevens

June rainfall in central Indiana came close to breaking records in some areas. Instead of 'enough' to get seedlings off to a good start, it was 'too much' causing some agricultural problems. And as we head into fall, the effects of all the water are still with us. The insect population is out of control and moisture related diseases and fungi are evident throughout the yard.

Our trees are affected as well as our vegetable gardens but, hopefully, not as much so. What to do when we notice the effects of pests or disease on our favorite tree? First of all, don't panic and grab the sprayer. The blight you see may not be a problem and you probably have the wrong mixture in the sprayer anyway. Treatment of pests and/or disease in trees requires a careful step-by-step analysis and, frequently, the help of a certified tree arborist or other expert.

The first step for an accurate diagnosis of the problem is to carefully identify the tree or shrub if you are in doubt. The symptoms of disease or pests can display differently on different species and most infectious pathogens and many pests are plant specific.

Next, gather data for a diagnosis. Plant diseases are caused by infectious, living agents such as fungi, viruses or bacteria; or by non-infectious circumstances such as nutrient deficiencies, pollutants, chemicals, mechanical damage to roots or trunk and temperature or moisture extremes. Most diseases are caused by non-infectious circumstances and require a totally different treatment approach. To differentiate, look for a pattern of abnormality. Check the tree from a distance. Is there a pattern of defoliation or discoloring? Could this be caused by drift from harmful sprays or de-icing salts or other harmful chemicals? Look at the area around the tree. Is there a drainage problem? Is there a history of chemical usage? Are other trees affected? The number of species affected may indicate whether the problem is caused by an infectious pathogen (species specific) or chemical or environmental damage or stress (not species specific).

Moving in closer, look for a symptomatic sign of the problem, e.g. defoliation caused by browning of the leaves. Check the signs on the individual leaf; note the shape, color, size and placement of the symptoms. Examine the tree closely. Look for signs indicating what the problem may be such as a fungus on the trunk, the presence of insects, or dead tissue on branches. Die back at the top of a tree may indicate a root disease, yellowing between the veins of the leaves is a symptom of a nutrient deficiency.

You may also want to make note of past events around the tree such as recent construction or changes in the grade of the area which could have an effect on the current health of the tree.

With this information in hand you should be ready for a diagnosis of the problem. There are numerous reference books available to assist with plant disease diagnosis. Many universities including Purdue University Cooperative Extension Services (www.agcom.purdue.edu) provide websites to help in diagnosis of plant pest and disease diagnosis. The *National Arbor Day Foundation* (www.arborday.org) is an excellent source of information regarding the care of trees. However, the diagnosis and treatment of disease in trees can be difficult and require considerable experience and training. Don't hesitate to contact a professional when necessary.

Generally, tree damage from pests is easier to diagnose than disease caused by infectious pathogens. There are three basic types of insects defined by their method of feeding: chewing, sucking and boring. Chewing insects eat plant tissue. Damage is evident by uneven margins or holes on the leaves or chewed buds. Sucking insects insert a feeding tube in the plant tissues and suck out the plant's juices. Symptoms of damage by sucking include drooping and/or wilting leaves or blooms, discoloration or a lack of vigor in the plant. Boring insects can be more difficult to detect. These insects tunnel into the wood of a tree and eat through it.

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Indications of borer damage include tell-tale holes or patterns in the trunk or branches or the presence of frass (semi-digested wood). A gradual or sudden decline in the health of a tree or shrub usually accompanied by thinness in the crown may indicate the presence of borers.

It's important to remember that many insects are not a real threat to the tree on which they are feeding. A good example is the *Maple bladder gall* which appears as small bumps on the upper surface of silver maple trees. The galls can be unsightly but seldom affect the health of the tree. One of our more infamous plant pests, the Japanese beetle, munches on leaves and blooms of numerous trees and garden plants, creating an unsightly mess. But, generally, only serious defoliation of young trees causes the tree to die. The use of pesticides to control insect pests also kills beneficial insects which aid the health of the tree and can offer serious threats to our environment. It is best to first consider whether treatment of any kind is really necessary for the health of the tree. Then, explore manual or safe organic controls where possible. The use of harsh chemicals should be a last resort and necessary for the health of the plant.

The proper treatment to control a particular insect depends on the species and how widespread the infestation. The information sources listed above provide information on insect pests as well as disease and, again, if in doubt, consult a professional.

INPAWS
By Shirley L. Cain

The title may imply that this is an article about animals that walk on pads. Not so, this brings to you an introduction to an organization where the protection of native plants (this includes trees) in the environment is the main issue. Indiana Native Plants and Wildflower Society, though barely a decade old, has been an important influence all across the state of Indiana.

Formed from the desire to preserve the native flora from disappearing totally under the tracks of the bulldozers, the planting of invasive plants by well-meaning landscapers and homeowners, and the general growth across the state that tends to remove all traces of native plant life, INPAWS has lent a hand in turning back the clock wherever it might in Indiana. The members have been active in every corner of the state.

The organization is divided into the West Central, South Central, Northwest, Central, and East Central regions. Through the activities of the regions and the watchful eye of those involved, anyone may become involved with the protection of the native plants no matter where you live in Indiana. Attending meetings of the regions, invitations to dig out invasive plants wherever they are found, and learning experiences of various kinds pulls this organization together.

INPAWS will hold an annual meeting in the fall. There will be an opportunity for the attendee to receive insight into the depth of the organization. The presenters bring an extraordinary wealth of knowledge to share with those who attend and many times the presenter will stay long enough for anyone to ask questions one-on-one.

Never heard of the organization? Go to "INPAWS" to reach them on the internet.

Pamphlets are available listing potential problem plants known as "invasive". If you need answers as to what to plant in Indiana, or help with identification of plants you have, look for help through this organization. To visit the website type in "INPAWS". There you will be able to read the mission statement, print out a membership form, get to know who is running the organization, get information on the region where you live, and have an opportunity to join one of the trips that they sponsor as well as links to other organizations.

INPAWS is about the business of making the right decision about what you plant. It is important that you pick the right tree the first time. There is little worse in the laying out of a landscape plan for a gardener to find, years later, that you planted a tree that should never have been planted. Know your trees before you lose that valuable growth period that might end in real disappoint, stretch your thinking into new avenues, and be informed about the area in which you live. Search out organizations whose mission is to just "do the right thing" for Indiana, and while you are at it, look into INPAWS. It might be a good fit.

Plant A Million
By Bob Eddleman

How about a million new trees to increase the tree canopy cover in Central Indiana? An effort called PLANT A MILLION is underway to make this happen in urban areas, new developments, rural residences and farmsteads. Ten Central Indiana Soil and Water Conservation Districts and the Hoosier Heartland Resource Conservation and Development Council are the driving forces behind this idea. Another important goal of this project is to help people understand the important place trees have in their lives. Planting trees in central Indian is important because many urban trees are aged and not being replaced. New subdivisions are springing up in corn and soybean fields and need many new trees planted.

Trees provide many benefits from insuring abundant oxygen supply, cooling neighborhoods, reducing storm water flows and many other benefits. An average person consumes 386 pounds of oxygen each year. A healthy 32-foot tall Oak tree, about twenty years old, can produce about 260 pounds of oxygen each year. We like trees around us because they make life more pleasant. Most of us respond to the presence of trees beyond simply observing their beauty. We feel serene, peaceful, restful and tranquil in a grove or backyard of trees. We are "at home" there.

Trees are usually on private property, but their mature size makes them a part of the community as well. There are many reasons to plant trees. Trees alter the environment in which we live by moderating climate, improving air quality, conserving water and harboring wildlife. Climate control is obtained by moderating the effects of sun, wind, and rain. Radiant energy from the sun is absorbed or deflected by leaves on deciduous trees in the summer and is only filtered by the branches of deciduous trees in winter. We are cooler when we stand in the shade of trees and are not exposed to direct sunlight. In winter, we value the sun's radiant energy; and because of this we should plant only small or deciduous on the south side of homes. Trees can affect wind speed and direction. The more compact the foliage on the tree or group of trees, the greater the influence of the windbreak. The downward fall of rain, sleet, and hail is initially absorbed or deflected by trees and this provides some protection for people, pets and buildings. Trees intercept water; store some of it, reducing storm runoff, and the possibility of flooding. Dew and frost are less common under trees because less radiant energy is released from the soil in those areas at night.

The Community and Urban Forestry Group from IDNR are helping to kick off the effort with a small grant. An educational effort will be started in the near future with project coordinator Bob Eddleman visiting service clubs, newspapers, radio and TV stations and potential funding sources. A steering committee has been organized to develop policy and to help move the project along. It is expected that some kind of cost sharing program will be developed so that homeowners, schools, local governments, and others will be able to get native trees in an economical way to increase the tree canopy cover throughout central Indiana.

For more information and to help with the project, contact Bob Eddleman at 317-271-4413.

Water and Mulch for Healthy Trees
By Kathryn Mascaro

Like all living creatures, trees require proper care. Do not assume that Mother Nature will "tend" your backyard trees just as she tends the trees in the forest. Forests grow in areas where the rich, friable soil supplies adequate moisture for good tree growth, plus forests supply their own blanket of mulch from the leaves that fall each autumn.

Water is important, especially when establishing a newly planted tree. Since too little water or too much can be deadly, it is best to establish a schedule for watering a tree during its first year or two. A new tree requires an inch of water every seven days. Each week, subtract the amount of rainfall from that one inch and apply the remaining amount of water to the base of the tree in one application.

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A garden hose trickling for 20 minutes will supply an inch of water to the root system of a one-inch caliper tree.
It requires 30 minutes for a two-inch caliper tree. Remember to periodically feel the moisture in the tree's root ball to be sure the tree isn't standing in water from another source like drainage from a sump pump or excessive runoff from lawn watering. If there are other water sources or really poor soil drainage, you may need to adjust your watering schedule accordingly.
A tree should be watered from spring up until the time the ground freezes in late autumn.

Established trees will need to be watered during a drought. Going a month without rain is especially tough on the tree planted by the driveway or planted between the street and the sidewalk. The best way to supply water is by slowly soaking the area under the tree canopy every 7-10 days. Evergreens, in particular, need to receive adequate water in the autumn so they can survive the drying winds of winter. Do not apply "the annual flower rule" to trees. By the time a tree shows significant wilt, it is probably too late to save it by watering. And remember yellowing leaves could also be a sign of too much water.

Mulch is healthy for trees. Organic mulch holds in moisture, decreasing the need for watering. It smothers weeds that compete with the tree for nutrients. It moderates the soil temperature, keeping the ground cooler in the summer and warmer in the winter. And it decomposes to supply needed nutrients and to improve the soil texture for healthier roots. Organic mulch can be shredded bark, shredded leaves, and pine straw or grass clippings. Inorganic mulch, such as gravel or a rubber product, is less effective in retaining moisture and moderating temperature besides failing to decompose and feed the soil.

Mulch should be applied in a 2-inch layer. Ideally it should cover the area from a few inches away from the base of the tree to the edge of the canopy. If it is impractical to apply the mulch under the full spread of the tree, a mulch circle with a 2-3 foot radius is still very beneficial. In addition to other benefits, mulch protects the tree trunk from damage cause by lawnmowers and weed-wackers that get too close to the trunk.

Although mulch is a wonderful thing, more is not better. Too deep mulch (5 inches or more) can smother and kill a tree. Or if the mulch is placed right against the base of the trunk, it can encourage moisture retention, gnawing damage from small rodents and girdling root. Therefore, it is best to leave a couple inches of bare ground at the very base of the tree, but not enough to encourage weed growth.

Nurture your trees by supplying them with the correct amount of water and appropriate mulch. They will repay you with cooling shade, cleaner air, a quieter yard and a beautiful landscape.

State Tree Nursery Program
By Cindy Beckner

Information obtained from IDNR

The IDNR Division of Forestry operates two tree nurseries, which produce conservation tree and shrub seedlings and windbreak conifer trees for Indiana landowners' use. Landowners may order and plant these trees for reforestation, erosion control, wildlife habitat development, watershed improvement, wetlands enhancement, windbreak, or other conservation purposes.

To obtain tree seedlings:

1. Forms for the Fall 2004/Spring 2005 season are available now online at http://www.in.gov/dnr/forestry/

2. After April 10, mail orders are no longer accepted, but over-the-counter sales are available at each nursery. Dates for counter sales vary due to weather, but generally are during March and April.

3. Beginning in late February and ending in early June (again, depending upon the weather), the nurseries will distribute the seedlings to customers for planting. Usually distribution starts in the southern counties and works up to the northern counties. Those who placed mail orders will receive a postcard letting them know when their seedlings can be picked up or when they are to be shipped.

Addresses of the nurseries:

Jasper-Pulaski Nursery
15508 West 700 North
Medaryville, IN 47957
(Hwy. 421, 5 miles north of Medaryville)
Phone: 219-843-4827
or e-mail JasperNursery@dnr.IN.gov

Vallonia Nursery
2782 W. Co. Rd. 540 S.
Mail: P.O. Box 218
Vallonia, IN 47281
(Go south of Brownstown on Hwy. 135 to Vallonia. Turn left on blacktop road and go 2.9 miles to nursery). Signs are posted.
Phone: 812-358-3621
Fax: 812-358-9033
or e-mail ValloniaNursery@dnr.IN.gov

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Types of trees available:
Conservation plants from state nurseries can be conveniently divided into three categories:
(a) pine (conifer) and hardwood seedlings for restoration and erosion control and will eventually grow into full size trees. (oak, tulip tree, walnut, white pine, ash, etc.)
(b) shrub seedlings for food and cover plantings for developing and improving wildlife habitat; will grow only to bush or small tree size. (shrub dogwood, hawthorne, lespedeza, etc.)
(c) windbreak conifers (white pine, red pine, northern white cedar and Norway spruce)

Size of trees available: Conifer seedlings are usually 4 to 14 inches tall, depending on growing conditions, and are baled or bundled in roll paper or bags. One to three bales of 100 conifer seedlings each will usually fit into the trunk of a normal sized car. The hardwood and wildlife shrub seedlings can range from 4 to 24 inches in height depending on species and growing conditions. Bundles of several hundred can be hauled in an automobile. Orders of several thousand require a truck; check with the nursery if a question arises about what vehicle may be required to haul trees.

Prices: The price of trees from state nurseries is kept low to encourage conservation plantings. Small seedlings shipped in bales of several hundred are easy to transport and simple to plant, keeping the process as economical as possible for the landowner.

State nurseries accept orders for trees until supplies are exhausted. Some species may be available throughout the ordering and planting period, but some species sell out early. If you desire a certain species, order early. The Nurseries reserve the right to substitute species if not instructed otherwise on the order form.

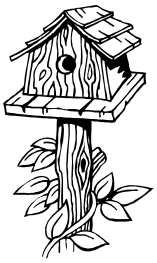
The sooner trees are planted, the better the chances of survival. Some losses always occur, but losses may be kept low by planting quickly. Tree planting instructions are included in each tree shipment.

Conservation seedlings are produced from seed collected in the wild and are not suited for shade and ornamental use. It is disappointing to plant a tree or shrub seedling for ornamental purposes, wait several years, and then find it does not produce the expected flowering or does not have the proper form. Help avoid such instances by ordering and using conservation seedlings only for conservation uses such as reforestation, erosion control, field windbreaks and wildlife habitat improvement.

It is inadvisable to use seedlings from state nurseries for Christmas tree plantings. The Christmas tree industry has developed special strains and varieties especially suited for Christmas tree production and many private nurseries supply such seedlings. State nurseries are oriented more toward conservation seedlings, and recommend obtaining Christmas tree seedlings from nurseries specializing in that product.

The Indiana Division of Forestry provides professional forest management services to all citizens. All 18 Districts Foresters are professionals, trained and skilled in the management of forest and associated resources. Typical services, rendered at no cost to the client, include performing forest inventories, determining stocking and merchantable volume, growth rates and possible harvest schedules. Assistance in tree planting, insect and disease control, timber sales, financial planning and related topics is also possible. District Foresters can be reached in their offices most Fridays. Further information on IDNR District Foresters call 317-232-4105 or at http://www.in.gov/dnr/forestry/.

Tree planting and the production of conservation tree seedlings is one of Indiana's oldest and brightest resource conservation programs. Such plantings help assure continued availability of wood products, protection of our state's soil and water, cover and food for our wildlife species, and other valued conservation benefits.



BACKYARD TREE FARM PROGRAM

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The Hoosier Heartland RC & D Council and its partnering organizations are equal

Most Indiana residents do not realize the importance of the scope, productivity, and economic impact of Indiana's forestland. Indiana is ranked first nationally in the manufacture of wood office furniture, and of our forest based businesses we are the fourth largest manufacturing sector by employment in our state.

Highlights of Indiana's forest economy are…
from USDA Forests of Indiana: Their Economic Importance 2004

- The contribution of forests to the Indiana economy is over $9 billion annually.
- Forest-based manufacturing provides over $8 billion in value of shipments.
- Forest-based recreation and tourism expenditures contribute $1 billion.
- Sale of trees generates estimated revenue of $175 million.
- The sale of associated forest products such as Christmas trees, maple syrup, and firewood, contributes nearly $25 million.
- Forest-based manufacturing provides employment for over 54,000 people and generates payrolls of over $1.4 billion annually.
- 4.3 million acres in Indiana are categorized as timberland.
- Each 1,000 acres of timberland in Indiana directly supports 12 forest based manufacturing jobs.
- For every acre of Indiana timberland, over $340 of direct forest-based manufacturing payroll is generated annually.

Indiana was over 85% forested 200 years ago according to accounts from Native Americans, settlers, and the Government Land Office. Today we are about 20% forested and are increasing each year. Which is promising to Indiana for habitat for wildlife, economics, and as more streams, riversides are increasing with forested areas it thus is helping to filter and clean Indiana's water supply.