

# Inspector Findings in ----Kentucky----

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<http://www.uky.edu/Agriculture/NurseryInspection>

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## PEST TO WATCH FOR IN MAY

- Bronze birch borer
- Dogwood borer
- Potato leafhopper
- Azalea lacebug
- Pine needle scale crawlers
- Euonymus scale crawlers
- Bagworm hatching
- Spruce needle miner
- Flatheaded apple tree borer
- Redbud leafhopper
- Boxwood leafminer
- Calico scale
- Juniper scale
- Twolined chestnut borer
- Two spotted spider mite
- Elm leaf beetle



Top left: Calico scale right: Juniper scale Middle Row: Flatheaded Apple Tree Borers Bottom left: Lace bug. Bottom right: Excrement from azalea lacebugs used to cover eggs on undersides of leaf.



Left: Dogwood borer adult Right: Dogwood borer larva (or caterpillar)

## Tips On Eastern Tent Caterpillar Control

By Lee Townsend, Extension Entomologist

Most all eastern tent caterpillar (ETC) egg masses have hatched. The small larvae are constructing silken platforms at major branches and soon will be expanding them into recognizable tents as foliage develops and their feeding increases.

While any insecticide applications made should be directed at small larvae, there is plenty of time to assess infestations and identify sites that need to be treated. Dipel or Bt-based insecticides work as stomach poisons so residues on plant foliage must be ingested. This means there should be plenty of open foliage on trees to capture

the spray droplets. These products have no contact activity through direct application to caterpillars or as a result of them crawling on treated surfaces.

ETC larvae tend to leave their tents and feed at relatively predictable times during the day - about 6 am and 8 pm. Nearly 80% of their feeding is done during the darkness near dawn and dusk. There is a mid-afternoon spurt of activity but morning and evening activity periods tend to be about twice as long. These feeding times are very synchronized when the caterpillars are small and begin to become less organized as they get older.

This behavior provides 2 advantages to them: 1) they are active when the risk of being eaten by birds is reduced and 2) they can digest their food and empty their gut in their tents during the warmer part of the day and leave it with an empty stomach when it is time to feed again.

This behavior can be used to advantage in timing an insecticide application immediately before ETC begin a major feeding spurt. An afternoon application, weather permitting, should be an effective strategy for 2 reasons. 1) ETC larvae spend a lot of time feeding at dusk and around dawn, so the insecticide residue will be "fresh". 2) Bt insecticides (DiPel, etc.) are broken down rapidly by sunlight. This application time reduces the exposure of the residue to UV light prior to feeding periods.

## Botryosphaeria Canker, A Common Problem Of Woody Ornamentals

by John Hartman

This article is adapted from a plant health newsletter article written by Ann Gould and Richard Buckley, plant pathologists at Rutgers University.

Botryosphaeria canker, caused by the fungus *Botryosphaeria dothidea*, is a common canker disease affecting many different kinds of woody plants. Affected woody plants include many ornamental species as well as fruit and nut crops (listed below). The fungus *B. dothidea* is an opportunistic pathogen that attacks trees and shrubs wounded or weakened by environmental stresses such as drought or winter injury. The disease can result in a branch dieback that may kill trees or severely reduce their aesthetic value.

**Symptoms.** Botryosphaeria canker symptoms vary with the species and age of the host and the severity of the predisposing stress. The fungus kills bark and sapwood tissue, causing areas of dead tissue called cankers to form. Cankers range from small, elliptical lesions that coalesce into large diffuse areas of blighted tissue, to large, elongate cankers delimited by callus tissue. Affected bark becomes darkened, rough, and may peel away. Multiple cankers of various sizes often develop on branch tissue, growing slowly until the limb is girdled and killed. Foliage on affected branches may fail to emerge in the spring, or may suddenly wilt and die in summer. The entire plant may be killed once the canker moves from the branch into the main stem.

**Disease Cycle.** *B. dothidea* survives the winter in tiny pycnidia (fruiting bodies, or structures that produce spores) embedded near the surface of cankered tissue. Infections occur when spores called conidia are splashed by rain to susceptible tissue from these fruiting bodies. Spore dispersal can occur during most of the year, but is most extensive during late spring and early summer. Infection occurs when fungal spores penetrate wounds or other openings in the bark. Pruning wounds, cracks, leaf scars, sunscald lesions, winter-injured areas, and senescent branches are all good entry sites for the fungus. It is possible that the fungus exists in some plants as a latent pathogen, capable of attacking from the inside any time the plant is weakened. Symptom development can take anywhere from 3 months to a year.

**Control.** An integrated approach to control most canker diseases, including Botryosphaeria canker, begins with the selection of disease-free planting material. Be sure to choose top quality material from a reputable dealer so that the disease is not moved into the landscape. Always inspect plant material thoroughly before planting. Most healthy, vigorous plants are resistant to Botryosphaeria canker. Environmental stress, however, can readily predispose plants to attack. Healthy trees and shrubs can resist infection and will readily slow or prevent spread of the disease throughout the branch. When planting new trees and shrubs, choose a site that is suitable to the horticultural requirements of the species. For example, planting sun-loving plants in shady locations or placing plants outside their natural range can predispose these plants to canker disease. With older, established trees, maintain or improve plant vigor with proper pruning, fertilization, and irrigation. Since drought stress predisposes trees to canker development, watering trees during times of drought is particularly important.

Since *B. dothidea* is an opportunistic fungus that infects stressed plants through existing openings, it is important to protect plants by carefully avoiding all unnecessary wounding. Closely monitor and control insects, mites, and disease problems. Through careful monitoring and early detection, Botryosphaeria canker can sometimes be eradicated before a significant reduction in the aesthetic value of the plant occurs. Branches with symptoms of canker should be promptly pruned during dry weather at least 6 to 8 inches below affected tissue. If possible, remove the branch from the tree by properly cutting the limb at the branch collar, not flush to the trunk. To prevent the spread of this disease on pruning tools, surface sterilize tools between cuts with 70% denatured alcohol, lysol, or 10% bleach. Since the fungus can persist and sporulate in dead plant material for extended periods, branches cut from diseased trees should be taken from the site and, if possible, chipped and composted. Fungicides or wound paints have not proven to be an effective control of most canker diseases and are not recommended.

Common hosts of Botryosphaeria canker. Apple, ash, basswood, birch, blueberry, brambles, buckeye, camellia,

camphor tree, carissa, catalpa, chinaberry, cotoneaster, crabapple, dogwood, Douglas-fir, elm, firethorn, fringe tree, fuchsia, grapevine, sweet gum, hawthorn, hibiscus, hickory, holly, hop hornbearn, horse-chestnut, juniper, katsura tree, mountain ash, mountain laurel, linden, black locust, honey locust, magnolia, maple, mimosa, mulberry, oak, Russian olive, peach, pear, pecan, photinia, pieris, pine, plane tree, poplar, privet, quince, redbud, rhododendron, rose, spice bush, sumac, sycamore, tree-of-heaven, tulip tree, tung-oil tree, viburnum, walnut, waxmyrtle, willow, and yellowwood.

## Do You Know Who Your Friends Are?

All bugs are bad, right? Not necessarily. Less than 10% of all insects actually are considered to be pests. Not bad when you consider that north of the US-Mexico border the species of insects outnumber the birds by more than 100 to 1. Lets take a quick look at some of these beneficials. Some of these will be quite common and large while others may be new to you and small.



Lady beetles are an important group of beneficial insects and are the most beneficial of all beetles. While the majority of them feed upon aphids, some species of lady beetles feed upon scales, mites, insect eggs, and small larvae. The larvae of the lady beetles typically look like tiny black alligators with numerous spines and often is colored with yellow or red spots or bands.



Another beneficial beetle is the ground beetle or, as it is sometimes called, the fiery hunter and/or caterpillar hunter. Most are night active. Some species feed on cutworms, caterpillars, beetle larvae and maggots. A few will climb trees in search of prey such as caterpillars.



The praying mantid (the real name is mantid, not mantis) is commonly revered by gardeners everywhere. Mantids can be common in nursery settings and home landscapes during summer. Although this insect is quite unique and fun to watch, it really is not that important as a control agent. It is a very general feeder and will actually eat other beneficial insects and fellow mantids.



Green lacewings are very important and common insects that feed primarily on aphids as both adults and larvae. The larva of the green lacewing has long sickle-like

mouthparts that it uses to puncture an aphid to feed on its juices. The larvae have a healthy appetite and will feed upon several aphids before pupating to an adult. One interesting note about the lacewing, the adult female lays eggs at the ends of tiny stalks that are usually attached to foliage.



Paper wasps, yellowjackets and hornets are also important insects, although ones to definitely be careful around. These insects feed their young pieces of chewed-up insects

and caterpillars. Research has shown that in fields where boxes were set up to encourage paper wasps to build nests, the amount of feeding damage done by caterpillars was significantly reduced. The obvious negatives may outweigh the pros in this type of arrangement.



Parasitic wasps are tiny wasps that are often unnoticed as adults but are easily spotted when they pupate. The adult female of these insects "stings" a

caterpillar and inserts an egg inside of it. This egg hatches into a tiny larva that feeds on the pest from within. When the wasp larva has finished development, it pupates on the outside of the host caterpillar in a white cocoon. This may be the only stage that is noticeable. If you do find such a caterpillar in your nursery or garden to not kill it. The host caterpillar has stopped feeding by this time and the cocoons will soon be "hatching" into more of these tiny wasps to repeat the process.

Not all parasitic wasps attack caterpillars. There are several species that attack flies, beetles and most any other insect. There are also some parasitic flies that are important in the control of several pests.



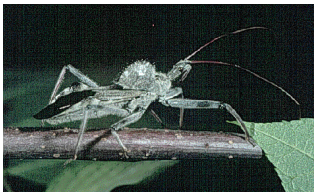
While most stink bugs are plant pests, there is one brightly colored orange and black stink bug that is predacious. It feeds upon small larvae (such as

Colorado potato beetle) and other small immature insects such as other stink bugs.

Syrphid flies are a large family that contains many brightly colored forms that resemble bees or wasps. None



of the syrphids will bite or sting humans. Syrphids occur in many habitats, usually on or around flowers. All are good fliers and often do a lot of hovering. Several species of syrphids feed upon aphids and are one of the most beneficial insects at controlling aphids.



Wheel bugs and assassin bugs are fairly common, brownish to black insects. They are about 0.5 to 1.5 inches long and occur on foliage. They are identifiable by the long curved beak which is kept under their body and their elongated head with the part behind the eyes necklike. The wheel bug is the easiest of this group to distinguish for it has a semicircular crest on its back that is lined with a row of teeth which resembles a cogwheel. Their usual diet is caterpillars. Be careful around these insects as they can inflict a painful bite.



Spiders play an important role in control of many insect pests, although they are not insects (they have 8 legs, not 6). Some spiders use their web to catch prey as they walk or fly into the web. Others actively hunt out prey or wait in ambush. Spiders typically prey upon soft bodied insects and caterpillars.

An excellent source for recognizing some of the more common insects is the Peterson Field Guide "Insects" by Donald J. Borror and Richard E. White. The cost is around \$20.00.

## Pine Needle Scale



Pine needle scales are easily recognized by their narrow white waxy covering with a yellow spot at one end. Heavy infestations can give a gray cast to the entire tree and needles may be yellow and stunted. Mugo and Scots pine are most commonly attacked but nearly all needle-bearing conifers can become infested, as well. Whole branches may be killed. Eventually, the entire tree can develop a sickly appearance and may die.

There are two generations each year so proper timing of insecticide treatments is essential for best results. This scale overwinters as a red egg underneath the white covering of the female. The eggs hatch in late April to

early May and the mobile "crawler" stage of the first generation moves to feeding sites on the needles. Crawlers do not have a waxy protective covering and are the stage most susceptible to control measures. Once settled, the crawler remains in place and continues development to the adult stage. Crawlers of the second generation are active in mid- to late July.

Insecticidal soap, diazinon, Dursban (chlorpyrifos), malathion, or Orthene (acephate) may be used to control the crawlers. Thorough spray coverage is needed for control.

A dormant oil spray in late March or early April before new growth develops also can be an effective control measure. Apply a dormant oil only when temperatures will not go below 40o F for 12 to 24 hours. Oil-sensitive plants listed under the Precautions section of the label should not be treated.

Egg hatch can vary from year to year so careful examination of needles for the small crawlers is necessary to determine when treatment should be made. Use a hand lens to examine the needles carefully for these small insects.

## Diseases of Tall Fescue

By Leon T. Lucas, Plant Pathologist, NC State University

### Brown Patch



Brown patch is the most serious and frequently occurring disease of tall fescue. The early symptoms of this disease are small circular brown patches .5 to 1 foot in diameter that develop during hot-wet weather in early summer. More patches develop and the older patches may continue to enlarge up to 4-6 feet in diameter during hot-wet weather. The lawn may have a uniform brown appearance without distinct patches from the disease by the end of the summer. Lesions that are olive color in the morning when dew is present, or during rainy weather, develop rapidly on young leaves. As the tissue dries the lesions become light tan. Webby mycelium of the fungus may be seen on the lesions and the surrounding grass blades in very humid weather. Vigorously growing plants that have received higher than recommended rates of nitrogen fertilizer during the spring or the summer are very susceptible to the disease. Tall fescue in partially shaded lawns and where air movement is restricted is more susceptible to brown patch because of higher humidity and more succulent growth.

Tall fescue established less than one year can be severely damaged by this disease. Heavy seeding rates, more than 6 pounds of seeds per 1,000 square foot, may result in many small seedlings with poor root systems that are very susceptible to brown patch. Damaged lawns may need renovating to correct soil pH and fertility problems and

replanting in September or October. Well-established lawns may be damaged during the summer months, but with proper maintenance (proper soil pH, low nitrogen levels in the summer, infrequent irrigation and regular mowing when the grass is dry) the grass will usually recover during the fall. Several fungicides can be used to control brown patch if applied every 2 to 3 weeks during hot-wet weather. This treatment is expensive and should not be needed if tall fescue is managed properly and shade problems are eliminated. A brown patch-like disease sometimes occurs on tall fescue during cool-wet weather in the winter. This disease has been named cool-weather brown patch or yellow patch. *Helminthosporium net blotch* occurs on tall fescue but usually does not cause severe damage. The symptoms of this disease are brown lesions with "net" patterns on leaves. Sometimes young seedlings will be killed by the fungus and can result in thinning during warm-moist weather in the fall or spring. Older plants will usually overcome the damage during favorable growing periods.

#### *White Patch*

White patch is a disease that often occurs in 1 to 2 year-old lawns that were planted in recently wooded areas. Symptoms are circular white patches 0.5 to 1 foot in diameter in the summer. Small tan mushrooms (about 1/4 inch in diameter) of the fungus, *Melanotus phillipsii* usually develop on some of the dead leaves. The tall fescue may become thin in spots, but usually enough plants survive and grow in the fall to fill in the affected spots. Proper soil pH and nutrient levels, especially phosphorus, in new lawns help to prevent or reduce the severity of this disease.

#### *Rust*

Rust occurs on tall fescue and is seen more often in later summer on older plants. The symptoms of rust are small yellow spots on leaves with masses of yellow to rust colored microscopic spores in the center of the spots. Infected leaves may become yellow and die slowly. Most of the tall fescue plants will recover from the rust disease during favorable growing conditions in the fall.

#### *Pythium Blight*



Pythium blight can occur on tall fescue during long periods of hot-wet weather. The turf appears to wilt in irregular patches and gray masses of fungus mycelium may be present on the dying grass. Low nitrogen levels, good soil drainage, infrequent irrigation and good air movement will help prevent Pythium blight. Fungicides may be needed to control this disease in highly maintained landscapes.

#### *Fairy Rings*

Fairy rings cause various symptoms including dead, green, or a combination of dead and green rings in turf. The rings may be from a few to hundreds of feet in diameter. Mushrooms may be present in the dead or green rings sometime during the year, and sometimes rings of mushrooms develop without any apparent effects on the grass. The rings occur in the same area for a number of years and usually enlarge each year. The fairy ring fungi grow in the soil and cause green rings by releasing nitrogen from organic matter. Grass may be killed by toxins from the fungi or by the mycelium making the soil hydrophobic and preventing water from wetting the soil. The fungi usually begin growing on some source of organic matter such as old stumps or wood buried in the soil. Removal of stumps and construction wood before planting the lawn will help prevent fairy rings. Practical controls are not available for fairy rings once symptoms develop. Removal of soil from affected rings and replacement with clean soil and replanting with healthy grass is a possibility, but is usually not practical. Loosening of the soil and watering the area frequently to wet the soil deeply is recommended to reduce the damage or control some fairy rings. Rototilling and replanting affected areas has eliminated some fairy rings.

#### *Abiotic Problems*

Drought and heat during the summer can damage tall fescue lawns. Seedlings that are less than one year old and have not established a good root system may die during dry weather. Old tall fescue plants may go dormant during dry weather in the summer and turn yellow or brown. Many of these plants will resume growth during cooler weather when adequate moisture is present. Young tall fescue lawns need irrigation during hot-dry weather. Older lawns will remain greener with irrigation. In both cases, lawns should be irrigated infrequently (once every 1 to 2 weeks during dry weather) and enough water should be applied to wet the soil at least 6 inches deep. A good management program that develops a healthy root system in the fall and spring will help tall fescue survive in dry weather.

Animal urine can cause serious damage to a tall fescue lawn. Circular dead areas 0.5 to 1 foot in diameter develop quickly, usually in dry weather where animals urinated. The dead grass has a "bronze-like" color for a few days after the symptoms first appear. More spots will appear if animals continue to use the area. A ring of greener and taller grass develops around the dead area after a few days due to the extra nitrogen from the urine. High soluble salts in the soil is the primary factor that kills the grass. Tall fescue plants do not spread over the spots and the turf becomes clumpy or weedy. The affected areas should be reseeded or sodded with healthy tall fescue. Extra irrigation during dry weather may dilute the soluble salts enough so that less damage will develop. Too much fertilizer can cause high soluble salts and kill tall fescue. Use recommended rates of fertilizers and

spread it evenly to avoid damage from salts. Heavy irrigation may be needed to leach the soluble salts deeper into the soil.

Other problems such as slime molds, moss, algae, too much shade, low soil pH, tree root competition and compaction from traffic are often seen on tall fescue lawns. Information on these problems is presented in other informational notes.

## Materials Used to Control Diseases Of Woody Plants

excerpt from Woody Plant Disease Control Guide ID 88. John Hartman, Mary Witt, Don Hershman and Robert McNiel

### *(Follow label instructions.)*

Fungicides are listed in this section, alphabetically by common chemical name followed by trade name and fungicide or bactericide uses and remarks.

**benomyl** — Benomyl WP; Fungicide with some systemic properties; effective against many diseases.

Tolerant strains of Botrytis, rose powdery mildew, and the apple scab fungus now occur. Do not use benomyl alone. Rather alternate or tank mix with other fungicides. Ineffective against Pythium, Phytophthora, and similar fungi. Benlate, a product containing benomyl, is not labeled for landscape use, though other benomyl forms are. Benlate is being withdrawn from the market for economic reasons. Benlate can still be used, but won't be available for sale after the end of this year (2002).

**bordeaux mixture** — Bordeaux mixture, Bordo, Copper Bordo; Equal parts by wt. copper sulfate (bluestone) + hydrated lime in water; most effective if freshly mixed but dried Bordeaux preparations are available. Some species of Ilex may be injured by copper. Proportions of chemical in the mixture can vary and are often expressed as pounds of copper sulfate, pounds of hydrated lime, and gallons of water.

**captan** — Captan Fungicide, Captan, Orthocide, Captan Dust; General protectant fungicide used for foliage diseases. Sometimes used for control of damping-off fungi.

**chlorothalonil** — Daconil 2787, Bravo 720; Broad-spectrum fungicide for control of foliage diseases including conifer needle diseases.

**copper** (fixed) — [see also Bordeaux mixture] Basic Copper Sulfate, Tribasic copper sulfate, Basi-Cop, Microcop, Copper 53 Fungicide, T-B-C-S 53, copper oxychloride sulfate; General protectant fungicide. May be phytotoxic to new spring growth, especially Ilex spp.

**copper hydroxide** — Kocide 101, 606, DF, Champion; General protectant fungicide. May be phytotoxic.

**copper sulfate pentahydrate** — Phytol 27; Fungicide for Dutch elm disease control via injection.

**dodemorph acetate** — Milban; For commercial greenhouse use only; controls powdery mildew.

**etrizazole** (ethazole) — Terrazole, Truban; Soil drench fungicide useful against Pythium, Phytophthora damping-off, and root rot.

**fenarimol** — Rubigan AS; Locally systemic fungicide for control of powdery mildew and apple scab.

**ferbam** — Carbamate T&O, Carbamate WDG, Ferbam, Karbam Black; General protectant fungicide. May leave black residue on flowers and foliage.

**folpet** — Phaltan, Folpet; Rose and garden fungicide.

**fosetyl-AI** — Aliette; Foliar and soil drench fungicide used for systemic control of Pythium and Phytophthora diseases.

**funginex** — Triforine; Rose disease control fungicide.

**Gallex** — For therapeutic treatment of crown gall.

**Galltrol-A, Norbac-84** (Agrobacterium radiobacter strain 84) — A preventive biocontrol of crown gall.

**iprodione** — Chipco 26019; Broad spectrum, locally systemic fungicide.

**mancozeb** — F-45, Fore, Mancozeb, Penncozeb, Protect T/O; General protectant fungicide for foliar diseases.

**maneb** — Dithane M-22, Maneb, Manex, Blitex, Chem Neb; General protectant fungicide for foliar diseases.

**MBC phosphate** — Lignasan BLP, Elmosan, Elm-Noculate, Correx, Elmpro, Fungisol; Soluble systemic fungicide injected for Dutch elm disease control.

**metalaxyl** — Subdue 2E Subdue II; Systemic soil drench fungicide used to control Pythium and Phytophthora diseases.

**pentachloronitrobenzene** — Terraclor, PCNB; Fungicide used principally to control Rhizoctonia using soil drench applications or incorporated into soil in dry form. May suppress root development in cuttings.

**piperalin** — Pipron; Powdery mildew fungicide for roses.

**propamocarb** — Banol; For control of Phytophthora root rots of container plants.

**propiconazole** — Banner, BannerMaxx, Alamo, Immunex; Locally systemic fungicide effective for anthracnose, scab, powdery mildew, and rust diseases. Alamo is injected for Dutch elm disease and oak wilt control.

**streptomycin** — Ag-Strep, Agrimycin, Phytomycin, Antibiotic spray powder, Streptomycin spray, Streptomycin WP, Streptomycin C 17; Antibiotic effective against bacteria but not fungi. Ineffective at low temperature. May cause phytotoxicity at high rates during hot weather. Effectiveness is favored by slow drying conditions. Not recommended for urban landscape situations.

**sulfur** — Sulfur dust, wettable, Thiolux, Liquid lime-sulfur; Elemental sulfur is a fungicide for powdery mildew; lime-sulfur can serve as both fungicide and insecticide and is phytotoxic on Viburnum.

**thiabendazole** — Arbotect 20-S; Systemic fungicide injected for Dutch elm disease and for sycamore anthracnose control.

**thiophanate-methyl** (dimethyl 4, 4-o-phenylenebis-[3,thioallophanate]) — Cleary's 3336, Fungo-Flo, Fungo DF, Domain FL, 3336 WP, Topsin M; Systemic fungicide having properties similar to benomyl.

**triadimefon** — Bayleton, Strike; Systemic fungicide for control of powdery mildew, rust diseases, some leaf spots, and flower blights.

**vinclozolin** — Ornalin, Curalan DF; For control of Botrytis diseases.

**ziram** — Ziram; General protectant fungicide.

## Daylily Rust Research

From NMPPro weekly email April 16, 2002

Steve Nameth and Mac Riedel at Ohio St. Univ. are starting a project to test daylily cultivars for susceptibility to daylily rust in Northern climates. They hope to receive samples of all of the many cultivars available from growers. They plan to post a Web site listing which cultivars have already been tested and which are needed. They will accept bare-root, one-fan samples. Send them to Mac Riedel, Dept. of Plant Pathology, OSU, 2021 Coffee Road, Columbus, OH 43210; (614) 292-9355; riedel.1@osu.edu, nameth2@osu.edu.

## Just For Your Information

From NMPPro weekly email April 2, 2002

An Arkansas State Plant Board subcommittee proposed to increase 2003 nursery license fees. Currently, licenses have a base fee with a sliding scale for acreage. The proposal calls for nurseries with up to 5,000 square feet of outdoor stock to pay \$150 annually; nurseries with 5,000-15,000 square feet to pay \$300, and those with more than 15,000 square feet to pay \$450. Propagators would have a stepping scale of \$150, \$300, \$450 and \$600 based on production method (container vs. field grown) and size of production area. All landscape contractors' licenses would be \$150.

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## Did You Know?

Did you know that before you can dig a hole and receive money, you are required to call 1-800-752-6007. This is a free, statewide, 24 hour service, supported by AT&T, in which you call the 800 number and they contact the utilities in your area. The local utilities will then come out and paint stripes on the ground to indicate any underground wires, pipelines etc. Two days advance notice is required before you dig. If you dig and cut a line without calling the service, you risk being fined.

Also, did you know that gas containers placed in the bed of pickups with plastic bedliners are subject to combustion. It seems that as the containers are in the bed they can build up static electricity. When these containers are refilled in the bed of the truck, sometimes a spark is created between the metal gas nozzle and the container. This spark can in turn ignite the gas in the container. One county agent had this happen to him several years ago. If you have a plastic bedliner, you should remove the container before filling.

### Degree Day Totals through April 24, 2002

Bardstown -401	Louisville - 370
Bowling Green - 441	Mayfield - 406
Henderson - 404	Paducah - 423
Huntington, WV -424	Princeton - 522
Lexington - 363	Quicksand - 477
London - 404	Somerset - 443

### Degree Day Totals through April 24, 2001

Bardstown - 342	Louisville - 356
Bowling Green - 404	Mayfield - 344
Henderson - 385	Paducah - 400
Huntington, WV - 346	Princeton - 432
Lexington - 331	Quicksand - 320
London - 334	Somerset - 351

### Degree Day Totals through April 24, 2000

Bardstown - 344	Louisville - 342
Bowling Green - 361	Mayfield - 378
Henderson - 388	Paducah - 374
Huntington, WV - 328	Princeton - 516
Lexington - 287	Quicksand - 350
London - 316	