



KENTUCKY PEST NEWS

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WHEAT

- **Correction**

TOBACCO

- **Potential pests under plastic**
- **SHADE TREES & ORNAMENTALS**
- **Bacterial wetwood and slime flux is different from winter pruning sap flow**

WHEAT

NOTE: There was an error in Kentucky Pest News issue (no. 871) in the article "Changed Wheat Foliar Fungicide Picture for 2000". In that article, the Tilt 24c label for Kentucky was said to expire on March 13, 1999. The actual date is March 13, 2000.

TOBACCO

PLASTIC ON GROUND - PESTS LURK AROUND

By Lee Townsend

Plastic liners for float beds, in fact any objects laying on the ground, provide a shelter for the accumulation of pillbugs, slugs, millipedes, and other scavenger creatures that could damage developing transplants in a few months. Moisture accumulates under them and this makes an excellent habitat for the pests. Get the materials moved so that the sunlight and wind can help to dry out the area if it is to be used again this year. Slug bait can be applied and Sevin bait can be used to control millipedes and pillbugs if they are already active. Pillbugs were serious pests in some float systems where they dug into the media and uprooted plants. There are no real good control measures to treat infested sites, prevention is a better strategy.

New sites for outdoor floats should be cleaned now.

LAWN AND TURF

- **Earthworm castings**

HOUSEHOLD

- **Boxelder bugs**
- **Lawn mites**
- **Snowfleas and other spring tales**

LIVESTOCK

- **Cattle lice and cattle grubs**

Close mowing and removal of grass and weeds will allow the area to dry and force potential pests to move away. Baits can be used as clean-out treatments before the plastic is put in place.

SHADE TREES & ORNAMENTALS

BACTERIAL WETWOOD AND SLIME FLUX IS DIFFERENT FROM WINTER PRUNING SAP FLOW

by John Hartman

When some tree species such as maples and birches are pruned in late winter, sap will flow from the cut branches. This is a normal wound response for these species and the sap may flow for several days or weeks. Do not confuse the flow of sap with the flow of wetwood fluids that are associated with infections by bacteria. Wetwood fluids may flow year-round and are often converted to slime flux. Slime flux, then is the foul-smelling and unsightly seepage from wounds in the bark or wood of shade trees infected with wetwood.

Symptoms and cause of wetwood. Wetwood seepage originates from infections of the heartwood and inner sapwood by common soil-inhabiting bacteria such as *Enterobacter cloacae* (*Erwinia nimmipressuralis*). There are several other bacterial species also associated with wetwood. Wetwood bacteria are capable of growing anaerobically (without oxygen) in the internal wood tissues.

Methane and osmotic or metabolic liquids, two by-products of the bacterial activity, accumulate under pressure and are forced out of the tree through the nearest available opening, usually a trunk wound or branch stub. Pruning a branch or taking a core with an increment borer can sometimes release the materials under pressure, squirting the worker with foul-smelling liquid and gas.

The wetwood fluid, as it flows to the wounded bark surface, is a clear, benign watery liquid containing several nutrients. On the surface it soon changes to a brown, slimy ooze, as a result of feeding by fungi, yeasts, bacteria, and insects. This surface slime flux may kill exposed cambium and bark surface organisms as well as grass growing near the base of the tree. It occurs most commonly on bacterial wetwood-susceptible trees, such as ash, birch, elm, horse chestnut, maple, oak, poplar, and willow. Although slime flux development is seasonal, evidence of wetwood and slime flux-stained bark is visible anytime. This slime is also different from the liquid associated with alcoholic flux and bleeding necrosis. Alcoholic flux emanates from shallow wounds and persists only for a short time and bleeding necrosis, associated with infections of the trunk by *Phytophthora* is associated with infections of phloem and cambial tissue, not deep xylem tissues.

Wetwood-infected trees have an internal core of wood that is wet but not decayed. These infected branch, trunk, and root tissues also have a high pH. Wetwood-infected wood is resistant to decay by fungi. Thus, wetwood-infected parts of the tree are biologically protected from decay by fungi. The extent of wetwood spread in the tree may be limited by tree defenses; however, wetwood can spread into new tissues as new injuries occur. Thus deep injection holes and pruning can expand wetwood infection. Take care to avoid pruning live branches on infected trees. There is no evidence that spread of wetwood bacteria on pruning tools leads to infections of new trees.

Disease management. Thus far, no effective preventive or curative measure is known. If the bark is being stained it is tempting to drain the slime flux away from the branch or trunk so that it drips on the ground. Drilling a hole into the tree and inserting a copper or semirigid plastic tube would accomplish this; however, this results in additional wounding and the threat of expanded wetwood or decay should be considered. Loose

dead bark should be carefully cut away so that the area can dry.

LAWN AND TURF

EARTHWORM CASTINGS RARELY WARRANT CONCERN

By Lee Townsend

Earthworms literally eat their way through the soil. They create channels for aeration and water penetration, in addition to bringing up deep soil to mix with that near the surface. Species that burrow deeply usually leave "casts", piles of fecal matter, on the surface at or near the entrance to their burrows. Casts are small, lumpy pellets or paste-like slurries that can form irregular mud-like shapes, heaps, or columns. Casts can cover significant portions of lawns or turf areas, creating a lumpy or crunchy feeling and giving a muddy appearance. They can be raked down or picked up during mowing. Lumpy lawns can be smoothed with a heavy lawn roller. No insecticides are registered for earthworm control.

LAWN MITES

by Lee Townsend

Clover mites and winter grain mites are active in some lawns. Clover mites are very small, reddish-brown creatures that appear only as moving dark spots to the naked eye. Winter grain mites have dark black bodies with long red legs.

Sheer numbers of either, plus the resulting red-brown stain left behind if they are crushed, make them unwelcome visitors. The red stains are not blood, they are the mite's body pigments. They are not blood feeders and will not harm people or pets, nor will they infest household products. Once inside a home or building they will soon die.

Both species feed on turf grasses or weeds. They can be especially abundant in the heavy, succulent growth of well-fertilized lawns. They usually enter a home around windows or doors so they are usually seen crawling along sills or thresholds. The mites can crawl up outside walls and may enter the buildings at upper levels.

Lawn mites are a temporary nuisance; they appear suddenly and then are gone. A soapy rag or wet sponge can be used to clean mites off of surfaces. Wipe carefully to avoid crushing the mites and causing stains. The crevice tool of a vacuum cleaner

may also be used to pick up mites. Rely on non-chemical control indoors. Do not apply insecticides to kitchen counters or other interior surfaces.

There is an increased potential for invading structures when grass extends up to the foundation. A plant bed or open area will provide a barrier that will stop many mites and provide a long term solution to persistent problems. Avoid overfertilizing lawns. This creates situations that are ideal for mites to increase to tremendous numbers.

Mites seen on the outside of buildings can be killed with a direct spray of an insecticidal soap. This treatment will not provide any residual control. A spray of Diazinon, Dursban, or Tempo along the outside walls and extending about 10 feet out from the foundation may provide some relief.

SNOWFLEAS AND OTHER SPRING TALES **By Lee Townsend**

Springtails are tiny wingless insects with distinctive heads and a hump-backed appearance. Their name comes from a forked structure attached to the underside of the abdomen which acts a spring to flip them into the air. This behavior gives them the appearance of tiny fleas. Other than being a nuisance, these unique little creatures pose no threat.

Snowfleas are a dark springtail that can occur in tremendous masses in lawns or around sidewalks. Hundreds to thousands of these curious creatures can create a moving mass on the grass or even snow surface.

Most springtails live in rich soil or leaf litter, under bark or decaying wood, or associated with fungi. Many are scavengers, feeding on decaying plants, fungi, molds, or algae. Springtails become abundant among wet leaves, soil, and plant material along a house foundations or sidewalks where they can be a temporary annoyance.

One white species lives on the surface of ponds and streams can be found in drinking water from cisterns or wells. While they are not a problem themselves, their presence probably indicates a break or potential contamination site in the line. Springtails also can occur around floor drains, in damp basements, and crawl spaces. Masses of these insects can be swept up and discarded.

Plants grown in homes and greenhouses sometimes become infested as a result of heavy breeding in the moist soil. Allowing the soil to dry out will usually eliminate them. Some species, such as the garden springtail can be found on field crops and vegetables, but they rarely cause enough damage to warrant control measures.

Most common springtails do not survive in dry conditions. Any steps to improve ventilation and promote drying are the best long term solutions. Removal of accumulations of wet leaves or other organic matter will eliminate breeding sites. Aerosol household insecticides can be used to treat infestations but will provide only temporary relief if the favorable conditions are not corrected.

HOUSEHOLD

BOXELDER BUGS ACTIVE THIS WINTER **By Lee Townsend**

Boxelder bugs are plant feeders that feed on the leaves, twigs, and seeds of boxelder, as well as maple, ash, and some fruits. These black insects with red markings move to sheltered areas (including nearby houses and buildings) in the fall and remain there during the winter. They are becoming active again prior to moving back outside. Sweep or vacuum and discard those found. They do not warrant an insecticide applicaton.

Boxelder bugs have not multiplied inside nor have they infested any household articles. These insects are only a nuisance or accidental invader but they may leave an odor and stain when crushed.

If large numbers of boxelder bugs are present every year, removal of female boxelder plants should be considered because this is the major host plant for them. Other alternatives include controlling insects while they are on the boxelder plant or direct sprays of congregations of the insects on outside walls. Insecticidal soap provides a safe control alternative but must be sprayed directly on the insects to be effective.

LIVESTOCK

CATTLE LICE AND CATTLE GRUBS

By Lee Townsend

Cattle grubs are still migrating through untreated cattle at this time of year. This is important to consider when treating animals that were not treated this fall for cattle grubs, or where the grub treatment history is unknown. In these cases, non-systemic pour-on insecticides with active ingredients such as permethrin (Atroban, Brute, DeLice, Expar, and Permethrin); lambda-cyhalothrin (Saber); or cyfluthrin (CyLence) are good choices to reduce louse numbers in a herd. However, these products have little effect on nits or louse eggs glued to the hair. A second treatment, applied 2 to 3 weeks after the first, will kill newly-hatched lice. Read the label directions carefully before application. Dust bags, backrubbers, ear tags and other self-application devices tend to miss lower portions of the animals so infestations can remain active at a low to moderate level.

Animals that are rubbing themselves against fences, trees, etc. may have lice. To confirm this as the problem, examine the animal in several places-neck, withers, brisket, shoulders, mid-back and tailhead. Sucking lice, with very narrow heads, may congregate in dense patches that look like black to blue-brown spots the size of a quarter or 50-cent piece. A close look will show the individual lice and nits. These lice spend most of their time attached to the animal and sucking blood. They are slow to move around. Chewing lice are less likely to be found in clusters unless the infestation is very heavy. They are brownish yellow and have a wide, flat head. Biting lice are easily disturbed and can be very active.