**TOBACCO**

**CURRENT BLUE MOLD STATUS**

by William Nesmith

The Kentucky Blue Mold Warning System is in its 25th year of service to Kentucky’s tobacco industry. This is the initial status report for the 2004 season.

Mainly, the news is good, so far. As of May 1, active blue mold in cultivated tobacco had not been reported from anywhere in the USA. However, blue mold is active in Cuba on cultivated tobacco and in southern Texas on *Nicotiana repanda*. Drs. Patrick Heist and Dave Zaitlin, Pikeville College and University of Kentucky, respectively, were recently in southern Texas collecting weedy tobacco species. They reported finding low populations of *N. repanda*, but when found it was nearly always infected and supporting significant sporulation. The North American Plant Disease Forecast System at North Carolina State University indicates that few weather events have occurred during the past month that were probably favorable for supporting inoculum transports to the southeastern USA from Cuba and to the Ohio River Valley from Texas; however, small windows of opportunity may have occurred.

Because tobacco transplant production systems are so conducive to blue mold development should even small amounts of inoculum arrive, we recommend that all tobacco transplant production systems should be managed to minimize leaf wetness and regular preventive fungicide sprays should be maintained. The labeled fungicides can be found in the March 8, 2004 issue of Kentucky Pest News. [http://www.uky.edu/Agriculture/kpn/kpn_04/pi040308.htm](http://www.uky.edu/Agriculture/kpn/kpn_04/pi040308.htm).

The winter was sufficiently harsh such that tobacco should have been killed further south than in recent years. Consequently, hopefully the disease has not been able to survive on systemically infected hosts as far north as it may in some years. Therefore, delaying arrival of the disease and slowing buildup once it arrives become paramount. Two other important steps towards this aim in the management of blue mold include: 1) Use locally grown transplants to avoid introduction into the area on transplants; and, 2) Once fungicide sprays have been stopped the remaining transplants should be destroyed to prevent the abandoned site from serving as an ideal staging area for blue mold.

Should blue mold be found or suspected, whole-plant-samples of suspects should be submitted immediately to the Plant Disease Diagnostic Laboratories. To prevent spore release, please insure that such samples are double-sealed in plastic bags and placed into a sturdy shipping container and either delivered directly to the nearest lab, or use over-night mail or carriers. At the laboratory, identification will occur based on microscopic examination and other assays may be performed. Let’s not repeat the situation we had last year when growers knew the disease was active for at least 30 days before informing agents of the situation. The tobacco trade agreement with the People’s Republic of China requires that all counties with blue mold be reported and that samples of blue mold from that county or marketing area be submitted to the appropriate USDA-APHIS officials for examination. Failure to comply with this requirement can impact export opportunities.

**SOUTHERN CORN LEAF BEETLE**

by Ric Bessin

The southern corn leaf beetle is actively feeding on early-planted corn in central Kentucky. This insect pest has become more of a problem in the past couple years and may not be properly recognized by many growers. It can reduce stands through feeding on young seedlings. Particularly while conditions are poor for rapid seedling growth, growers need to monitor fields for this insect pest.

Southern corn leaf beetle is a small (<1/4 inch) dark beetle that is camouflaged and easily blends in with the soil. When disturbed it readily drops to the ground. The beetle attacks young seedling by feeding on the leaf margins and chewing into the side of the stem. The damage can easily be mistaken as young cutworm or armyworm feeding. In the field I visited, many of the plants had the youngest leaves remaining attached, but laying on the soil as would be the case with cutworms. The beetles will lay their eggs
at the base of the plants and larvae feed on the roots of corn during the early summer.

When scouting fields for cutworms, it is important to try and locate the insect to determine which insect is causing the damage. There are no thresholds for southern corn leaf beetle, but Illinois and Iowa have used 25% infested/damage plants as a guideline for treatment. A few insecticides are specifically labeled for Southern corn leaf beetle, including Capture 2 EC, Lorsban 4 E, and Warrior T (suppression).

**CUTWORMS ACTIVE IN CORN**  
by Ric Bessen

Cutworms are active in corn in many regions of the state. Some fields have exceeded levels needing control. While growing conditions remain cool, producers should be monitoring their corn regularly as the seedlings are not able to rapidly outgrow the damage caused by cutworms. Growers should also keep in mind that damage caused by southern corn leaf beetle can easily be mistaken for cutworm damage (see the preceding article). Search around the bases of cut plants for the cutworm larvae.

Many growers have opted to use insecticide seed treatments (Poncho, Cruiser, Gaucho, Prescribe) to reduce problems with soil insects including cutworms. My experience with these seed treatments and other preventive treatments is that these do help to reduce cutworm losses, but when cutworm populations are high, significant cutting may still occur. These fields still need to be monitored for cutworm activity as well as other seedling pests.

**FORAGE CROPS**

**RECENT OUTBREAK OF APHANOMYCES ROOT ROT IN ALFALFA**  
by Paul Vincelli

A late-March seeding of alfalfa in Adair County was diagnosed last week in the UK Diagnostic Labs as Aphanomyces root rot. Throughout the field, a large proportion of the seedlings exhibited stunting, purpling, and even death. The producer noticed the symptoms during the last week of April. Although this could be an isolated case, it is more likely that other cases have occurred, at least sporadically.

Aphanomyces root rot typically is associated with sustained periods of wet soils. Soil moisture in Adair County during much of April was on the moderately dry side. Dry soils don’t completely arrest the activity of the fungus, however, and the 3½ day period of rainy weather that was recorded in the Campbellsville Weather Station from 11-14 April was apparently enough to trigger activity of the organism in the soil. More recent periods of extended rainfall, such as this past weekend, could have also been favorable for infections in other locations.

The variety seeded in the case we diagnosed was one with a “R” (=Resistance) rating to Aphanomyces. This means that 31-50% of the seedlings of that variety show resistance to Aphanomyces in standardized tests. This also means that anywhere from 50-69% of the seedlings are susceptible, and that is very consistent with what was reported from the field: widespread damage to approximately half to two-thirds of the seedlings, with the other seedlings appearing healthy.

UK research in the 1990’s clearly implicated Aphanomyces as a major risk to spring-seeded alfalfa in many Kentucky soils. Based on that research, we have recommended that spring seedings be made with alfalfa varieties having an R or HR (“High Resistance” rating, meaning that over 50% of the seedlings exhibit resistance) rating to Aphanomyces. In our previous research, these two levels of resistance have performed equally well, even in sites with severe pressure. However, under certain circumstances, the experience in Adair County suggests that varieties with an HR level of resistance are needed. In any cases, a springtime seeding of a variety with a lower rating than “R” to Aphanomyces is unwise.

As a reminder, the levels of susceptibility/resistance to diseases in alfalfa are:

<table>
<thead>
<tr>
<th>Resistance Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5%</td>
<td>Susceptible (S)</td>
</tr>
<tr>
<td>6-14%</td>
<td>Low resistance (LR)</td>
</tr>
<tr>
<td>14-30%</td>
<td>Moderate resistance (MR)</td>
</tr>
<tr>
<td>31-50%</td>
<td>Resistance (R)</td>
</tr>
<tr>
<td>51+%</td>
<td>High resistance (HR)</td>
</tr>
</tbody>
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**LAWN & TURF**

**MICRODOCHIUM PATCH ACTIVE IN NORTHERN KENTUCKY**  
by Paul Vincelli

A case of Microdochium patch was diagnosed on golf course turf (creeping bentgrass) in Northern Kentucky last week. This is the same fungus that causes pink snow mold. In the absence of snow cover, the disease is referred to as Microdochium patch (=Fusarium patch).

The cool, wet conditions that have prevailed lately have been very conducive for activity of this fungus.

**Symptoms and Disease Development**

Patches start ½ to one inch in diameter, and increase to 3-6 inches in size. Active infections are reddish-brown, which fade to tan as the disease progresses. As disease development continues, streaks of diseased grass can develop, much like a Pythium cottony blight outbreak in the summer. This is because the spores of Microdochium nivale are spread on mowing equipment when the grass is wet, as is true of Pythium spores.

Outbreaks are most common on bentgrass seeded last year, since juvenile plants are very susceptible to infection. Overseeding of established swards can also enhance disease pressure.

**Management**

Although most turf swards will not need protection, seedings of creeping bentgrass made late last summer should be monitored for the disease and treated with fungicide if necessary.

The best choices at this time of year are products with fludioxonil (Medallion), trifloxystrobin (Compass),...
propiconazole (Banner) or thiophanate-methyl (Cleary's 3336, Fungo, Systec 1998). Avoid products containing PCNB, because that active ingredient can persist for several months in the sward and has the potential to cause phytotoxicity in warm weather.

Also, review the fertility program, since high nitrogen fertility can enhance susceptibility. Decrease shade if feasible.

**PESTS OF HUMANS**

**MOSQUITO AND WEST NILE VIRUS OUTLOOK 2004**

by Lee Townsend

The 2004 West Nile virus - mosquito season is underway. According to the CDC web site, bird or animal infections have been reported from Alabama, California, Florida, Georgia, Louisiana, New York, Pennsylvania and Texas, and a human case has been reported from Ohio as of April 28, 2004.

Experts believe West Nile virus is now established as a seasonal epidemic disease in North America that flares up in the summer and continues into the fall. WNV affects the central nervous system. According to the Centers for Disease Control (CDC) less than 1 percent of the people infected with the disease develop a serious illness, about 20 percent display mild symptoms and 80 percent will not show any symptoms.

It is too early to predict how this season will compare to previous years. Below is a summary of West Nile virus activity in Kentucky during 2002 and 2003. These data came from the Ky Cabinet for Health Services, Dept of Public Health and are available at chs.ky.gov/publichealth/west_nile_virus.htm.

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horses</td>
<td>513 (78 counties)</td>
<td>102 (54 counties)</td>
</tr>
<tr>
<td>Birds</td>
<td>603 (101 counties)</td>
<td>111 in 46 counties</td>
</tr>
<tr>
<td>Mosquito pools</td>
<td>55 (10 counties)</td>
<td>10 (5 counties)</td>
</tr>
<tr>
<td>Humans cases</td>
<td>75</td>
<td>14</td>
</tr>
</tbody>
</table>

Mosquitoes are carriers of WNV that become infected when they feed on infected birds. The virus can be spread to other animals or humans when infected mosquitoes feed again. According to the CDC, people over 50 are at higher risk to develop serious symptoms of WNV if they are bitten by infected mosquitoes.

**Protecting yourself from mosquitoes**

When outdoors, use insect repellents containing DEET (N, N-diethyl-meta-toluamide). Follow the directions on the package.

Many mosquitoes are most active at dusk and dawn. Be sure to use insect repellent and wear long sleeves and pants at these times or consider staying indoors during these hours. Light-colored clothing can help you see mosquitoes that land on you.

Make sure you have good screens on your windows and doors to keep mosquitoes out.

Get rid of mosquito breeding sites by emptying standing water from flower pots, buckets and barrels. Change the water in pet dishes and replace the water in bird baths weekly. Drill holes in tire swings so water drains out. Keep children's wading pools empty and on their sides when they aren't being used.

**SHADE TREES & ORNAMENTALS**

**DAYLILY LEAF STREAK ALERT**

by John Hartman

Daylilies (Hemerocallis spp.), grown widely in Kentucky, are often considered problem-free perennials. Many growers, while searching for daylily rust, a new disease introduced into Kentucky a few years ago, noticed another disease causing widespread and serious leaf necrosis. The cause of the problem is daylily leaf streak, a fungal disease of daylily foliage that has been around for many years. New infections are beginning now and will continue throughout the summer.

**Symptoms.** Leaf streak disease causes elongate brown streaks and yellowing of leaves. The disease begins with water-soaked (dark green) spots along the leaf midvein. The spots turn reddish-brown and can be mistaken for rust. Spots enlarge and coalesce, forming dead streaks along the length of the leaf. Severely infected leaves turn yellow and often become infected by secondary fungi Alternaria and Fusarium and may eventually die. Within the daylily clump, the inner and lower leaves are more seriously affected because conditions there are moist. The fungus eventually produces black seed-like structures, sclerotia, on dying older leaves. These structures survive winter, allowing the fungus to begin new infections in spring.

**Cause and biology.** Leaf streak is caused by the fungus Aureobasidium microstictum. The fungus survives winter in infected plant material. In the spring, spores are released during wet periods and are splashed by rain to nearby leaves, where they initiate new infections. Infections continue throughout the summer months during warm, wet weather. Spores are spread from infected leaves to healthy leaves by splashing water and the mechanical rubbing of two leaves. Injuries from insect pests or from frost damage may precede infection. Other fungi such as Collecephalus and Colletotrichum also cause leaf streak and leaf blight symptoms.

**Disease management.** Aureobasidium leaf streak can usually be managed through cultural practices. The fungus is favored by leaf wetness so practices which reduce foliar moisture will be helpful.

- Divide daylilies as needed to prevent the planting from becoming overcrowded.
- Water daylilies at the base of the plant to prevent water splashing.
- Avoid working with daylilies while they are wet.
- If leaf streak develops, remove infected leaves to slow the spread of the disease.
• At the end of the growing season, cut back and remove infected foliage to prevent fungal spores from surviving winter in plant debris.
• Susceptibility varies among daylily cultivars, but none are known to be resistant.
• If the disease is serious and the cultural practices listed above fail to control the disease, fungicides containing thiophanate-methyl, myclobutanil, or daconil are thought to be effective against leaf streak. However, before applying check to be sure the formulation of fungicide is labeled for foliar diseases of daylilies or for ornamentals in general.

**DIAGNOSTIC LAB-HIGHLIGHTS**
by Julie Beale and Paul Bachi

Samples diagnosed recently included cold injury, barley yellow dwarf virus, and Rhizoctonia infection on wheat; cold injury and Pythium root rot on tobacco; Alternaria leaf spot on impatiens; high pH problems and iron deficiency on petunia; iron and magnesium deficiency on cabbage, as well as iron deficiency on okra; Gloeosporium canker on blueberry; cold injury on cherry; Botryosphaeria canker on crabapple; blister mite on ornamental pear; cedar-apple rust on juniper; wet feet on taxus; Pythium root rot, localized dry spot and pink snow mold on bentgrass; and nitrogen deficiency on bluegrass.

**INSECT TRAP COUNTS**

UKREC, Princeton, KY April 9-16, 2004

Black Cutworm .................................................. 6
True Armyworm ................................................ 20
Corn Earworm ................................................... 3
European corn borer ............................................. 0

For information on trap counts in southern Illinois visit the Hines Report at - http://www.ipm.uiuc.edu/pubs/hines_report/index.html. The Hines Report is posted weekly by Ron Hines, Senior Research Specialist, at the University of Illinois Dixon Springs Agricultural Center

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