Count your blessing! Kentucky’s crop is at a very susceptible stage and the weather statewide has been favorable much of the time for both foliar and systemic development of blue mold, but it appears the main party is missing - the pathogen. Despite many periods of ideal weather for its development in the commonwealth during the past two months, no cases of blue mold have been confirmed in Kentucky as of June 16. This supports the theory that blue mold did not overwinter here, was not imported on transplants this year, and probably had not arrived via wind prior to June 1, or if it did, the disease has been controlled to a very high degree. Consequently, keeping up to date on airborne sources of the disease, continuing to scout for early outbreaks, and being prepared to react correctly in a timely manner are especially important this season. The Kentucky Blue Mold Warning System should be especially valuable to decision making in seasons like this.

Blue mold remains active in other tobacco types from Florida to Pennsylvania. With certain weather patterns, any of that blue mold could threaten Kentucky’s crop. However, the greater risk is from activity in burley in eastern Tennessee, Washington County. Infected transplants were set to the field, so we should assume the disease is active and spreading, based on the weather being experienced in that region. The weather events of late last week likely spread blue mold spores from this east Tennessee activity into nearby areas of east Tennessee and western North Carolina. But, it is unlikely that viable spores reached Kentucky last week from this source, because when the winds from east Tennessee were moving northeast it was sunny over most of Kentucky, so the spores should have been killed. Unlike the blue mold developing in the flue cured region, blue mold developing on burley in the mountains is not likely to be stopped by hot weather, based on normal weather events of the region. Thus, we should expect this mountain center of blue mold to expand in the region, remain active until frost, and be a potential treat to Kentucky’s burley (especially in east and southeast Kentucky) as long as the disease remains active.

With the fungicides available now, and the situation we appear to face, it is reasonable to assume that chemical control applications are not needed in the field for blue mold until either a watch or warning is issued for an area. The opportunity exists for growers to reduce input costs without sustaining economic losses from blue mold, if they are properly informed. However, for this approach to work, we must remain informed, communicating, and react rapidly to changing situations! I strongly urge twice weekly monitoring of the Kentucky Blue Warning System’s website by all county extension agents for agriculture and regular communication of that information to growers through local programming. Keep a line or two in radio spots and news articles to keep growers informed of the status and monitoring programs to help insure confidence in the system. The website is located at
Currently, we need to focus on preventing build up in abandoned transplant sites - both burley and dark. Any transplants still needed should be receiving weekly fungicide sprays, otherwise the plants should be destroyed. Prompt destruction of transplant-staging areas is especially important in years when blue mold did not arrive via transplants! Regular fungicide spray schedules should be maintained in all transplant production and transplant-holding systems - See issue 943 of Kentucky Pest News (March 18, 2002) for more specifics on chemical options. Both burley and dark tobacco crops should be scouted twice weekly for evidence of blue mold, especially in eastern portions of the burley belt. If activity is found, promptly report it, and immediately start fungicide programs in the field. See issue 948 of Kentucky Pest News (April 22, 2002) for the foliar fungicide options labeled in Kentucky for use in the field.

COMMON STALK BORERS CAN HIT BORDER ROW PLANTS
by Lee Townsend

Common stalk borers may be found tunneling into tobacco plant stalks along field borders, especially where weeds and grasses grow. The larvae are purple-brown with a white stripe down the back and broken white stripes on the sides. This insect will tunnel into tobacco stalks and leaf stems as well as corn and other crops and plants. An insecticide application at this point will not penetrate the plant and kill the larvae. The infestation may result in scattered leaf loss and some stunted plants but should not cause extensive losses. Infestations are usually heaviest along field margins.

The adult stage, a moth, lays its eggs in late summer and early fall on grasses. Quackgrass and giant foxtail seem to be very attractive plants for egg deposition along with orchard grass and dead winter wheat. The eggs will remain on the plants during the winter and will hatch next spring. Mow and remove this material as much as possible in order to reduce potential problems with the insect next season.

STORED GRAIN
STORED GRAIN INSECTICIDE TREATMENTS

by Doug Johnson

A number of individuals have commented that they can not find recommendations for stored wheat. Additionally, several people have also mentioned using a publication numbered ENT-19. This is an old publication. If you have a copy that contains recommendations, they are without question out of date. So, let's look at what we do have.

All stored grain insecticide and fumigant recommendations are found at the end of their respective production recommendations. So you will find the stored grain insecticide/fumigants in the following pubs:

ENT 13 Insecticide Recommendations for Soybean
ENT 16 Insecticide Recommendations for Field Corn
ENT 24 Insecticide Recommendations for Grain Sorghum (Milo)
ENT 47 Insecticide Recommendations for Small Grains (Barley, Oats, Wheat)
ENT-62 Insecticide Recommendations for Pop Corn

You can find these recommendations in three forms. On the web you may view the publications at: http://www.uky.edu/Agriculture/PAT/recs/rechome.htm

The are also published as “single sheets”, that is, a separate hand out for each crop and in the Entomology “Big Book”. “The Big Book” is simply a bound verison of the grain, forage and livestock recommendations. These publications are available from your county extension agent for Agriculture.

Now that you know where to look please note: There is a misprint in the 2002 wheat storage recommendations. In the 2002 Insect Management Recommendations “Big Book”, in ENT-47) “Insecticide Recommendations for Small Grains” (pages 60-63), the rate for Reldan 4E for stored wheat on page 63 is INCORRECTLY listed as 1.5 fl oz per 1000 bu. The CORRECT rate is 11.5 fl. oz. per 1000 bu.

The Entomology Website copy and the printed “single copy” of ENT-47 are correct. Only the “big book” copy of ENT-47 on page 63 is incorrect. My apologies for this mistake. Just another reason to ALWAYS READ THE LABEL!

As for ENT-19, Controlling Insects in Stored Grain. This publication is out of date, and as far as I know is out of print. However, there do seem to be a few copies floating around. If you have one, please do NOT use the insecticide recommendations. The textual material describing various sanitary practices is still quite
adequate. However, all the insecticide information is dated. Hopefully, a new version of this publication will be available as an ENTFACT in the near future. But even so, all the insecticide/fumigant recommendations will stay with the production publications mentioned above.

LAWN & TURF

RED THREAD

by Paul Vincelli

Weather through much of this spring has been favorable for activity of red thread, a very common disease of cool-season turfgrasses in Kentucky. The disease has been seen on Kentucky bluegrass and tall fescue, and is likely active on other cool-season grasses, as well.

Symptoms
Patches measuring 3-8 inches in size that may coalesce. Leaves in these patches have tan or pinkish tan, blighted blades with thin fungal structures at leaf tips that look like a red cotton thread. This disease doesn't cause death of turf in Kentucky landscapes but can cause cosmetic damage that is bothersome to some homeowners.

Conditions That Favor Disease
Any condition that slows growth of a dense turfgrass sward can favor this disease. Nitrogen deficiency is the most common factor that enhances red thread, although other site-specific factors can be involved. Sometimes, the disease can be surprisingly active in limited areas of swards that are adequately fertilized and appear to be well-maintained. I strongly suspect that these "hot spots" of red thread (usually just a small area of a yard) have a thatch/soil environment that somehow favors activity of the red thread fungus. Figuring out this sort of thing, however, may take the equivalent of a Ph.D. thesis project.

Prognosis
The disease may continue activity during humid weather but will cease activity when warm, dry weather sets in. Since this sort of weather will also slow growth of cool-season grasses, recovery of affected patches will be slow during summer, but they do recover.

Management Suggestions
Ideally, let nature take its course. If the homeowner wishes to take some action, a light application of nitrogen--no more than 1/2 lb N/1000 ft2--will help the grass outgrow the infection. Fertilizing now, however, increases the need for irrigation and mowing later. Thus, the cost of fertilizing to combat red thread is more than just the fertilizer plus application costs.

Effective fungicides are also available. The most effective are Prostar and Heritage; Banner MAXX and other formulations of propiconazole are also effective. Professional turf managers can find information of efficacy of fungicides against red thread and other diseases in the UK Extension Publication PPA-1, Chemical Control of Turfgrass Diseases, available at county Extension offices or on the web at

Two fungicides which at one time were formulated for home lawn use and were reasonably effective-chlorothalonil and iprodione--have since been revoked for home lawn use. Personally, I discourage the routine use of a fungicide for red thread in the landscape for a number of reasons, but fungicides are an option for those who want an "estate-type" lawn. Homeowners who wish to apply a fungicide for red thread have limited choices. One option is to hire a lawn care company, since the active ingredients in the products listed above are not, to my knowledge, available in homeowner-size formulations. Another option is to apply Spectracide Immunox Lawn Disease Control Systemic Fungicide. This product contains myclobutanil, a weaker fungicide against red thread than the products listed above, but it does have the advantage of being available for purchase by the homeowner. Recognize that a fungicide can do is protect new growth, and not turn the dead leaves green again.

SHADE TREES & ORNAMENTALS

LEYLAND CYPRESS IN KENTUCKY MAY BE DISEASE PRONE

by John Hartman

Leyland cypress is not widely grown in Kentucky, but is beginning to appear more and more in landscapes statewide. It is admired for its columnar habit and adaptability for use as a screen in the landscape. As the tree gains in popularity, we are beginning to notice diseases, especially canker diseases which can be quite damaging. The information that follows is adapted from a plant pathology information note from North Carolina State University authored by M. Benson, L. Grand, and R. Jones.

Seridium Canker: Caused by the fungus Seridium unicorne, this disease is probably the most damaging disease of Leyland cypress. Cankers may form on stems, branches and in branch axils of trees of any age
Botryosphaeria Canker. The outward symptoms of Botryosphaeria canker, caused by the fungus Botryosphaeria dothidea, are similar to those of Seridium canker; that is, scattered bright reddish-brown dead twigs and branches occurring in otherwise healthy foliage. Cankers on small twigs and branches are also similar to those caused by Seridium, except that extensive resin exudation usually does not occur. Unlike Seridium, however, Botryosphaeria may produce long, narrow cankers on the trunk that might extend for a foot or more in length. These cankers rarely girdle the trunk, but will kill any branches that may be encompassed by the canker as it enlarges. Fruiting bodies of the fungus, perithecia and/or pycnidia, are produced just beneath the bark, but their presence can be discerned as tiny raised pimples scattered over the surface of the canker. Spread of the fungus is similar to that described above for Seridium, except that ascospores of Botryosphaeria may be spread by wind.

Botryosphaeria canker most often occurs on plants that are under considerable stress, and an effective control strategy should include keeping the plants growing as vigorously as possible. Mulch plants yearly and provide adequate water during extended dry periods. Avoid heavy fertilization and severe pruning of established plants. Prune out and destroy dead branches. Effective chemical control is not available.

Cercospora Needle Blight. We have not observed needle blight, caused by the fungus Cercosporidium sequoiae (syn. Asperisporium sequelae; Cercospora sequoiae), on cypress in Kentucky. However, it does occur on juniper, arbor vitae, and other needle evergreens. The first symptom of Cercospora needle blight is a browning of the needles in the lower crown next to the stem. The disease slowly spreads upward and outward until, in severe cases, only the needles at the tips of the upper branches remain green. In a general way, these symptoms mimic those caused by severe stress where the interior needles turn yellow and fall off. Fruiting bodies of the fungus appear as tiny, greenish pustules on the upper surface of the needles or on small twigs. Spores (conidia) are present throughout the spring and summer and are spread by wind. Infection usually occurs during periods of wet weather.

Cercospora needle blight can be controlled by spraying with copper-containing fungicides. There are no fungicides registered specifically for the disease on Leyland cypress, but Kocide is registered for general use on ornamentals. Sprays can be applied at 10-day intervals from bud break until new growth matures.

Root Diseases. Two root diseases may affect Leyland cypress; Phytophthora root rot caused by Phytophthora cinnamomi, and Annosus root rot caused by Heterobasidion annosum. Phytophthora root rot can be a problem in both the nursery and landscape, and primarily affects smaller roots on plants. Large established trees in the landscape are rarely affected by Phytophthora root rot. The disease is usually more damaging in situations where soil drainage is very poor. Plants with severe root damage may exhibit a general yellowing of the foliage and some tip dieback. Phytophthora root rot can only be diagnosed with certainty by laboratory analysis of affected roots. Control of the disease in nurseries can be obtained by treatment with Subdue Maxx. Chemical control is not recommended for landscape trees.

Annosus root rot is more often usually associated with cypress in the landscape. Initial infection by the fungus is by spores on the freshly cut stumps of conifers, most commonly pine. The fungus grows through the stump and its root system and may infect adjacent trees through root contact. The larger roots of the newly infected plants are killed and decayed. Top symptoms may include a yellowing and slow decline, followed by
death of the tree; or the foliage on the entire tree may suddenly turn a reddish-brown color. Some trees may fall over before any crown symptoms are present. Fruiting bodies of the fungus may form at the base of the tree, usually beneath the mulch or leaf litter. These are usually small, irregular in shape, brown on the upper surface and white on the lower surface. There are no effective control measures once the tree is infected. As a preventative measure, stumps of felled, living conifers should be either removed completely, or the stump surface treated with dry granular borax immediately after the tree is felled.

**DIAGNOSTIC LAB HIGHLIGHTS**

by Julie Beale and Paul Bachi

Field crop samples diagnosed during the past week have included herbicide injury, zinc deficiency and drowning on corn; spring black stem on alfalfa; black shank, soreshin, blackleg, Pythium root rot, target spot, Fusarium wilt, tomato spotted wilt virus, both acid soil and alkalinity problems, herbicide injury, and fertilizer burn on tobacco.

Fruit and vegetable samples have included Rhizoctonia fruit rot and Mycosphaerella leaf spot on strawberry; orange rust and cane borer on blackberry; Phytophthora root rot on raspberry; Xylaria root rot, frogeye leaf spot, cedar-apple rust and fire blight on apple; bacterial spot on peach; black knot on plum; bacterial soft rot on cabbage; magnesium deficiency on sweet corn; angular leaf spot (Pseudomonas) on cantaloupe; bacterial wilt on cucumber; drowning on potato; bacterial spot, Rhizoctonia root rot and frost injury on pepper; early blight, Pseudomonas blight, Pythium root rot; wet feet, and Sclerotinia stem rot on tomato.

Ornamental samples have included bacterial spot and Phyllosticta leaf spot on ivy; Botrytis stem blight on peony; rust on hollyhock and mayapple; Rhizoctonia root rot on impatiens and petunia; Heterosporium leaf spot on iris; plant bug injury on various herbaceous ornamentals; brown patch and red thread on tall fescue turf; necrotic ringspot on bluegrass; leaf/flower gall on azalea; anthracnose on ash; fire blight and apple scab on crabapple; powdery mildew on euonymus; Phyllosticta leaf spot on maple; Lophodermium needle cast and ozone injury on pine; and black spot rosette disease on rose.

**INSECT TRAP COUNTS**

UKREC, Princeton, KY - May 31-June 7

Black Cutworm ........................................ 1
True armyworm ........................................... 7
Corn earworm ............................................. 10
European corn borer ...................................... 0
Southwestern corn borer .................................. 3

NOTE: Trade names are used to simplify the information presented in this newsletter. No endorsement by the Cooperative Extension Service is intended, nor is criticism implied of similar products that are not named.