USEFUL PLANT SCIENCE RESOURCE NOW AVAILABLE TO U.K. EMPLOYEES
by Kenny Seebold, John Hartman, Don Hershman, and Paul Vincelli

The University of Kentucky has recently become a partner of the Plant Management Network (PMN). As described on the PMN website (www.plantmanagementnetwork.org), the Plant Management Network is a "collaborative, multidisciplinary, electronic-only resource that provides credible, hands-on applied information to agricultural practitioners, researchers, educators, and other key stakeholders in the plant science community, worldwide. PMN is a not-for-profit endeavor sponsored by a growing list of involved partners". A number of resources can be accessed via the PMN, including four peer-reviewed online journals (Plant Health Progress, Applied Turfgrass Science, Crop Management, and Forage and Grazinglands), an extensive collection of digital images, a plant science database, and educational and training resources. The plant science database indexes publications from PMN and a number of web-based resources, such as fact sheets and pesticide labels, from the university, industry, and non-profit partners of PMN. Also accessible to PMN members are yearly results of field trials conducted in the areas of arthropod management, disease management, and variety testing. Up-to-date information on soybean rust is also available on the PMN site.

The PMN will be a useful resource for most departments in the College of Agriculture at UK. Faculty (research and extension), staff (research/extension associates and technicians), students, and county agents affiliated with UK are eligible for free access to the PMN as part of the partnership. Personnel located on main campus or the Princeton Research and Education Center can access PMN through the Agricultural Information Center (AIC) page (www.uky.edu/Libraries/aic). Once inside the AIC site, choose the PMN link from the drop-down menu under “Selected Databases”, located in the upper left-hand corner of the page. This will open the PMN page without requiring a user name or password. Personnel, such as county agents, located off campus can access PMN two different ways:

**EZProxy.** The EZProxy system provides off-campus access to resources restricted to UK faculty, staff, and students. Library resources provided by the AIC are restricted and therefore require proxy access for personnel located off-campus. The use of EZProxy requires a valid UK identification card or library card whose barcode has been activated at a UK Libraries circulation desk. For those who do not have a library card, call or email Patty Hornback (859) 257-2758 (phornbac@uky.edu) or Valerie Perry (859) 257-2758 (vperry@uky.edu). Either person will assist with obtaining a library card and any other questions regarding access to PMN.

**PMN User Access.** Eligible participants, as described above, can sign up for a free user name and password.
using their ‘uky.edu’ email address. To register, follow this link: [http://www.plantmanagementnetwork.org/subscriptions/activation/default.cfm?ID=106327](http://www.plantmanagementnetwork.org/subscriptions/activation/default.cfm?ID=106327). Fill out the ‘Account Activation’ form and account will be created. This option is available to on-campus and off-campus users. Registered users will receive a monthly newsletter, PMN Update, that contains alerts to new articles and resources.

Funding for access to PMN was provided by the UK Integrated Pest Management program. We hope that everyone will take advantage of PMN. Please take the time to explore the PMN site to discover the variety of information and other resources that are available.

### TOBACCO

#### BLUE MOLD UPDATE
by Kenny Seebold

As of 5 May 2006, blue mold has been reported only in western Cuba and western Mexico. The current forecast from the North American Plant Disease Forecast Center projects a low threat to U.S. production areas at this time from the known sources of the disease in Cuba and Mexico. Blue mold has not been found in the U.S. to date. Check the Kentucky Tobacco Disease Information Page for updates ([http://www.uky.edu/Ag/kpn/kyblue/kyblue.htm](http://www.uky.edu/Ag/kpn/kyblue/kyblue.htm)).

### TRANSPLANT DISEASES
by Kenny Seebold

Pythium root rot continues to be a major problem of tobacco transplants around Kentucky. A common theme is that growers aren’t using Terramaster 4EC preventively and we’re also finding that many producers are not applying the appropriate rate (1 fl oz/100 gal for preventive applications and 1.4 fl oz/100 gal for curative treatments). Product purchased last year will have the old label affixed and the old rate, 0.7 fl oz/100 gal, listed; this may be one reason why some growers are using less than the full rate of Terramaster. On the flip side, I visited a couple of greenhouses recently and diagnosed phytotoxicity caused by Terramaster. Abnormal whitening of the leaf veins was prevalent, along with severe foliar burn. In both cases, the growers had applied the material over the top to the foliage and then watered it in. What’s more, an etridiazole-containing material that shall remain nameless had been applied (off-label, of course!) that added to the dose provided by Terramaster. As you know, Terramaster should be applied to float-bed water only and foliar applications should be avoided. This is more critical than ever now that Chemtura has taken Terramaster 35W off the market. The solvents and carriers in Terramaster 4EC can cause severe injury if applied to tobacco transplants over the top. What’s more, the concentration of Terramaster that accumulates around the base of the transplant plug following a foliar application will be higher than we see with Terramaster applied to the float water, increasing the likelihood of stunting and abnormal whitening of plants.

Target spot has been the second-most reported problem this season. I visited two greenhouses with severe outbreaks of target spot – the worst I’ve seen in my admittedly brief career at UK. In one case, the grower had deliberately kept N levels low (like almost none!) to “harden off” his plants and he wound up with severe target spot in just about the entire greenhouse. Work done at NC State University suggests that tobacco is generally more susceptible to target spot if allowed to become N-deficient, so encourage growers to keep N at the proper level to help keep this disease in check. Be prepared for more target spot in the coming weeks, as we are getting reports and samples from around the state. We don’t want them to push N levels too high, as this may lead to problems such as blackleg. Dithane DF (0.5 lb/100 gal or 1 tsp. product per gallon of spray) can also be effective in suppressing target spot when used preventively.

Sclerotinia collar rot has been a relatively minor problem so far this year. With continued cool temperatures and overcast conditions, we could see more outbreaks of this disease. Please encourage growers to scout their transplants frequently and continue to employ good cultural practices (ventilation, adequate fertilization, and sanitation) to keep diseases in check.

### CORN

#### GREENHOUSE STUDIES CONFIRM JOHNSONGRASS RESISTANCE TO ACCENT
by J. D. Green and W. W. Witt

The resistance of johnsongrass to Accent herbicide (i.e. nicosulfuron) was confirmed through greenhouse studies. Johnsongrass seed were collected from two different corn fields in Kentucky where poor control of johnsongrass had been observed. These fields are located in Adair and Marion counties where a continuous rotation of corn was grown during the past several years. Accent was the primary herbicide which had been applied each year for johnsongrass control since soybeans were not part of the crop rotation.

For both johnsongrass populations, greenhouse studies indicate that seedling johnsongrass (8 to 12 inches tall)
was not controlled when Accent was applied at 1x, 5x, and 10x of the normal application rate of 0.67 oz/A. Fresh weight or dry weight of treated johnsongrass plants were not reduced with plants grown from seed collected from these two sites. Whereas, plant biomass was reduced by 70% or more with plants treated from a susceptible population of johnsongrass.

Our results indicate that at least two johnsongrass populations in Kentucky have developed resistance to nicosulfuron, a commonly used ALS-type herbicide for johnsongrass control in field corn grown for grain or silage. Other herbicide products used for johnsongrass control or suppression have not been evaluated on these Accent resistant populations. These ALS-type herbicides include Beacon, Equip, Spirit, Steadfast ATZ, Option, and Lightning. Therefore, caution should also be used to avoid year to year dependence on these herbicide products for johnsongrass control in corn. To best manage this problem will require planting corn hybrids which have tolerance to glyphosate (eg. Roundup, Glyphomax, Touchdown, etc.) or use of crop rotations with soybeans whereby other herbicide mode of actions can be used such as Assure II, Fusion, Select, and glyphosate.

These findings are significant since johnsongrass continues to be one of the major weed problems encountered in corn and soybean production. In a 2004 weed survey johnsongrass ranked third as the most frequently observed weed species within Kentucky; thus, johnsongrass continues to be a significant threat each year to grain crop production. The potential exists for other fields to develop resistance in the future if crop producers and applicators do not regularly rotate herbicide products with different modes of activity.

**LAWN & TURF**

**MICRODOCHIUM PATCH AND DOLLAR SPOT ACTIVITY**

by Paul Vincelli

With weather during the past four weeks of average to above-average rainfall and warmer-than-normal temperatures, several destructive turf diseases have become active on golf-type turfs.

Microdochium patch was diagnosed on creeping bentgrass tees, sporulating like crazy and poised to do a lot of damage, should weather conditions permit. This disease is caused by the same fungus that causes pink snow mold, only the damage has a much more of a “smeared” look when it is active under mild, rainy weather than under snow cover. Plus, you won’t see the white to pink mycelium you may be accustomed to seeing as snow melts away. This disease can be very destructive to creeping bentgrass and *Poa annua*.

If Microdochium patch is active on high-maintenance turfs, fungicide applications may be advisable until temperatures exceed 60°F during rain events (or 65°F, if the disease has recently been active). Medallion or a tank-mix of iprodione and chlorothalonil (for example, Chipco 26GT plus Daconil Ultrex), and a variety of other products are good choices for preventive control. For curative control, I tend to favor the iprodione/chlorothalonil tank-mix for the first application, to knock back spore populations as much as possible.

Dollar spot has been quite active on our creeping bentgrass research plots in Lexington over the past two weeks, producing aggressive foliar mycelium in turf injured last fall which has yet failed to recover from the damage. This disease activity is premature, and it makes me think we may be looking at a potentially bad year for dollar spot. Managers of turfgrasses susceptible to dollar spot, especially creeping bentgrass, perennial ryegrass, and *Poa annua*, should monitor the situation closely. Some of the most effective fungicides for control of this disease include Emerald; products containing chlorothalonil, iprodione, or vinclozolin; Eagle; Banner or other propiconazole-containing products; Rubigan; and thiophanate-methyl (assuming no fungicide resistance on your swards).

See the Extension publication PPA-1, *Chemical Control of Turfgrass Diseases* (http://www.ca.uky.edu/agc/pubs/ppa/ppa1/ppa1.pdf), for more information on fungicide choices and proper use. Cultural practices for reducing disease pressure are also described in this publication.

**SHADE TREES & ORNAMENTALS**

**FREEZE INJURY SYMPTOMS APPEARING ON SOME TREES**

by John Hartman and Julie Beale

During the past week, several examples of what appear to be symptoms of freeze injury are being noticed on landscape trees in Central Kentucky. County Extension Agents may have clients who are noticing these symptoms and are asking for an explanation. The most commonly affected tree appears to be red maple, but Japanese maple, dogwood, lilac and spruce have also shown symptoms. On affected trees, new leaves and shoots, small and succulent at the time of the injury, are now blackened or brown and dead. New shoots have begun to grow back from adventitious buds. These injuries may have occurred when temperatures reached 28°F in the Bluegrass area on April 9, when foliage was just emerging.
In some instances of injury to red maples, the leaves simply failed to emerge in spring and phloem tissues from the twig ends back into larger branches were brown. These affected trees are now producing shoots from buds farther back on the affected branches. Perhaps fall cold temperatures before trees were fully hardened-off affected these trees. Temperatures of more than 70F in mid-November followed three days later by temperatures in the mid-teens could have affected some trees.

Where these cold injuries have been observed, it seems that mostly young or newly transplanted trees have been affected. On individual trees, some branches are affected and some are not - and in the landscape, affected trees may be growing side-by-side with unaffected trees. It appears that within a neighborhood or community, only a few trees are affected. Although official temperatures have not been low enough to cause widespread damage, temperatures in specific landscapes may be a few degrees lower than those reported at official weather stations. There is not a good explanation for the sporadic nature of the injury within a tree or a landscape. Perhaps tree stress or distribution of ice-nucleating bacteria such as *Pseudomonas syringae* are factors.

**MYSTERY DAMAGE TO OAKS MAY BE MAY BEETLES (OR JUNE)**

*by Lee Townsend*

May (or June) beetle is a generic term for a large group of 1/2 to 3/4 inch-long light brown to dark brown beetles that emerge from May into June in Kentucky. The adults of many species don’t feed but some strip the foliage from oaks, and some other trees. They feed at night, eating the leaf tissue and leaving only veins. As a result, the damage appears suddenly with no apparent cause. An unblemished tree that stood proud last night, is a tattered leftover the next morning. The hard-shelled culprits are off burping politely in a shaded spot waiting to continue their nocturnal meal.

It seems a mystery with no clues. At least caterpillars have to hang around awhile to complete feeding. Even if they’re gone, there is an old shed exoskeleton or some indication of the perpetrator. The wily beetles can fly in, feed, and fly away with no trace.

If the damage is caught early or the trees are checked at night to confirm beetles and the damage source, small trees can be protected with an application of Sevin.