



KENTUCKY PEST NEWS

ENTOMOLOGY & PLANT PATHOLOGY & WEED SCIENCE

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ANNOUNCEMENTS

PESTICIDE TRAINING MEETINGS

Here are some educational meetings that have been approved for continuing certification credit in various categories. A complete listing is available at the Kentucky Department of Agriculture web site at www.KYAGR.COM/index.htm

***Nov 29 Categories 1, 10, and 12** Annual CCA Meeting, UK Research and Education Center, Princeton, KY

Dec 6 - Categories 3, 10, 12 Turf and Ornamental Pest Training, Fayette Co Extension Office, Lexington. (9 am - 3:30 pm). There is limited seating at this location; call the extension office, (859) 257-5582, to register.

***Dec 6-7 - Categories 1, 10, 12** Kentuckiana Crop Production Seminar, Executive Inn, Owensboro, KY

Dec 12 - Categories 1, 3, 10, and 12 Pesticide Certification Training, Agriculture Building, Morehead State University, Morehead, KY (9 am - 3:30 pm)
Darlene Thorpe (859) 257-5955 (Certification testing WILL NOT be available following this meeting.)

TAKE STEPS TO PROCURE THE CORRECT DISEASE-RESISTANT VARIETY FOR THE SITE

by William Nesmith

A most important steps in tobacco production from the disease control standpoint is selecting the correct variety for the site. Using the proper resistant varieties has done more to reduce losses from tobacco diseases than any other single control measure, except for crop rotation. Today's tobacco farmer can select varieties with resistance to black root rot, black shank, tobacco mosaic virus, potyviruses (tobacco etch and tobacco vein mottling), wildfire, Fusarium wilt, and tolerance to blue mold. However, no variety has high resistance to all of these diseases. Some varieties have resistance to only one or two diseases while others combine resistance to many. In addition, there are many agronomic traits for which growers must consider before selecting a variety. Unfortunately, the importance of making these decisions in a timely manner with proper follow-through is being underestimated on many farms.

Growers need to plan in advance to insure the variety they need is available for each field. At least four main criteria should be used in the decision of variety selection, from the disease side of the equation. These are:

- * What disease(s) exist on the site (particular field

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and others in the operation that might aid spread of disease to it?

- * What is the disease potential (disease severity probability) of the site - determined mainly by rotation and environmental characteristics of the site?
- * What level of disease resistance or tolerance is present in available varieties?
- * Will the variety, or an equally appropriate alternative, actually be available when needed?

I want to emphasize this last point, more, because it has become a significant problem in some areas. After the decision of what variety is needed has been made, growers also need to take steps to insure the particular variety will be available when and where it is needed. Many are dropping the ball at this point! Not too long ago, that was not so difficult - you selected it and planted it yourself. But today, the plants are more often purchased as containerized plants from off-the-farm. Moreover, the seller (transplant producer) is often determining what varieties are available, and that is not compatible with matching the variety to the problems of the site.

Here are some cases that reflect these points from the past season. We encountered a significant number of cases where the variety planted in the field was not what the grower had planned to set. However, in many of the cases, the growers had done little until it was too late to insure the desired variety would be available, so they took what was left. Four of the most common problems encountered were:

1. Setting into susceptible varieties known black shank infested fields, without rotation; especially common was NCBH 129 set in such sites resulting in near total destruction.
2. Failure to use varieties with high resistance to black root rot in fields with a long history of continuous tobacco; a common mistake was use of Hybrid 403 in these fields with severe stunting and 30% or greater yield reduction.
3. Fields with widespread damage from Tobacco Mosaic Virus (TMV) resulting from using a TMV-susceptible variety, especially Tennessee 86 and Ky 8959, that probably was inoculated at the greenhouse.
4. Late set crops sustaining serious damage from the potyvirus complex, especially 14xL8 which is highly susceptible to these viruses.

LAWN & TURF

GOLF COURSE USES NO LONGER

SUPPORTED FOR MANEB REGISTRATIONS by Paul Vincelli

The following announcement was recently obtained from a listserv of announcements from the USDA Office of Pest Management Policy: "As a result of clarifying potential risks associated with the use of maneb, the registrant, has voluntarily withdrawn support for any golf course uses of the fungicide. Maneb is used on a wide variety of crops, and is one of the three EBDC chemicals that will be undergoing re-registration in 2002-2003. The current label allows for golf course use by commercial applicators. This new information will be factored into the Maneb risk assessments."

My perception is that maneb is used very little in golf turfs in Kentucky, so this regulatory decision should have little effect on disease control on golf courses in the Commonwealth.

CONTROLLING MICRODOCHIUM PATCH/PINK SNOW MOLD IN AMENITY TURFS by Paul Vincelli

The most destructive disease of cool-season turfgrasses in Kentucky from October through April (and sometimes into June) is known by several names: pink snow mold, *Microdochium* patch, and *Fusarium* patch. This confusion of names is due to the fact that the damage caused by the causal fungus—*Microdochium nivale*—appears different depending on whether snow cover is present.

SYMPTOMS AND DISEASE DEVELOPMENT

When infections develop under snow cover, circular patches of tan or gray, blighted turf develop. As the snow recedes, these patches will be covered with whitish fungal mycelium that may have a pinkish cast if *M. nivale* is sporulating heavily. Usually several weeks of continuous snow cover is sufficient to cause severe crown loss in highly susceptible turfs, such as creeping bentgrass and recently seeded or overseeded perennial ryegrass. Destructive levels of the "pink snow mold" phase of the disease are not common in Kentucky because we usually do not have those long periods of sustained snow cover, at least in our current climate.

When infections develop during sustained periods of cool, wet weather without snow cover, affected areas of turfgrass tend to not be in discrete, circular patches, but

are more “smeared”. Damage can even track in the same direction as the mower, as spores are easily carried on mower equipment. In those cases, affected turf often has a light brown or reddish brown color. This “Microdochium patch” phase of the disease is actually very common in Kentucky. (Since the pathogen name used to be *Fusarium nivale*, this phase is also referred to as “Fusarium patch”.) Recently seeded grasses, especially perennial ryegrass and creeping bentgrass, are commonly affected any time sustained wet weather occurs with temperatures between 33 and 63°F, with the most aggressive outbreaks probably in the range of 38-44°F.

INFLUENCE OF RECENT WEATHER

Aggressive disease outbreaks develop during either sustained periods of cool, wet weather or under snow cover. These conditions favor disease in two ways: by providing moisture that favors fungal activity, and by providing the cloud cover or shading that reduces photosynthesis, thereby stressing the grass. Until the past week, weather has been mild, dry, and generally sunny throughout most areas of Kentucky. However, recent wet weather may have initiated disease activity. We are approaching the time of year when the risk is high for newly seeded creeping bentgrass or newly seeded or overseeded perennial ryegrass.

MANAGEMENT

Cultural practices

Several cultural practices can reduce disease activity. Be sure to mow the turf until it stops growing. A tall, floppy turf will not dry out well and consequently will suffer more damage. Remove mulches of fallen leaves, for the same reason. Providing conditions favorable for drainage of surface moisture will also reduce disease pressure. Cultural practices that improve surface drying will also help, such as aerification and verticutting. Several of the newer creeping bentgrass varieties appropriate for Kentucky have exhibited less damage from pink snow mold than the standard Penncross under Kentucky conditions, including L-93, A-1, A-2, A-4, G-1, and G-6.

Fungicides

For most turf situations in Kentucky, fungicides are not necessary to maintain turf health against this disease, including many situations on golf courses. For newly seeded creeping bentgrass or newly seeded or overseeded perennial ryegrass, the use of fungicides becomes an important option. The level of disease pressure we experience from now through mid- to late-spring is dependent on the weather we have, which of course cannot be predicted to the level of certainty we need.

There are two strategies: scout and treat curatively, or treat preventively. For those willing to scout, at this time of year our UK Plant Diagnostic Clinics can provide same-day or next-day confirmation (excluding weekends) of samples affected by *M. nivale*. As long as scouting is done regularly and thoroughly, one should be able to prevent dramatic and severe damage except for that which occurs under sustained snow cover. A more cautious approach would be to apply a preventive fungicide, which I think is wise for new seedings of these two grasses, especially for greens.

As a general rule for Kentucky, for new bentgrass seedings, the first spray should be applied with the onset of cool, wet weather in November. Through winter, only one more application may be needed. Applications do not need to be made frequently, because turf growth is minimal to nonexistent, and cool temperatures retard fungicide breakdown. One or more springtime applications against the Microdochium patch phase may be necessary depending on the weather experienced, especially for putting greens. On established bentgrass swards that consistently exhibit the disease, make an application in November and then repeat in mid- to late-January. For new or overseeded perennial ryegrass, a single application during the first two weeks of December is probably all that its needed.

There are a number of good fungicide choices for controlling either the pink snow mold phase or the Microdochium patch phase. Based on published reports, I consider the following fungicides to provide good to excellent control in most experiments: Heritage, Daconil and other chlorothalonil-containing products, Chipco 26GT, Banner MAXX, and Cleary’s 3336 and other thiophanate methyl-containing products.

Against the pink snow mold phase of the disease, the most effective fungicides have been PCNB-containing products (such as Terraclor, Turfcide, and others) and the tank-mix of chlorothalonil (Daconil, for example) with iprodione (Chipco 26GT, for example). I have concerns about the use of PCNB, however. PCNB has been shown repeatedly to cause injury (phytotoxicity) to turfgrasses, visible as a yellowing or browning of leaf tissue when warm weather occurs. There are concerns that PCNB is also a “root pruner”, as well. To my knowledge, stunting of roots has not actually been demonstrated in turfgrasses, although it has been reported on snap beans in the scientific literature. Nevertheless, the use of PCNB clearly poses some risk of phytotoxicity to turfgrasses. The risk of phytotoxicity is greatest when PCNB is applied during mid-winter thaws or during late-winter. Because of the very long half-life of PCNB in the soil, treated turfgrass is at risk if warm weather occurs before the

concentration of PCNB has diminished to a safe level. Also, repeated use of PCNB through the snow mold season poses some risk of phytotoxicity, possibly by causing a buildup of active ingredient in the soil that is still present at high concentration when warm weather arrives. PCNB has also caused phytotoxicity when applied in November in several studies. Because equal control can be obtained with the iprodione/chlorothalonil tank-mix with no known risk of phytotoxicity, the I would opt for that treatment instead of PCNB. If using PCNB, apply it only during the window from early December until mid-January in order to minimize the risk of phytotoxicity.

Whenever using fungicides for the snow mold phase, apply them in at least 2 gallons of water per 1000 ft². Obtaining good coverage of foliage and the uppermost layer of thatch is important for optimal protection.

SHADE TREES & ORNAMENTALS

PERENNIAL PLANTS IN THE GARDEN - SANITATION FOR DISEASE CONTROL by John Hartman

When surveying the perennial flower garden at season's end, some gardeners might have noticed the blighted peonies, the browning daylilies, the wilted hostas, and the leaf-spotted iris. It sometimes seems that plant diseases in the garden got out of hand this past year. The observant gardener may recall that many of these same diseases were in the garden the previous year. Could there be a connection of disease occurrence from one season to the next? For many diseases, there is definitely a connection. Plant diseases are caused by microbes such as fungi, bacteria, nematodes, phytoplasmas, and viruses. At the end of a growing season, many of these microbes go dormant, hibernating in the dead plants that they probably had a hand in killing. Thus, in many cases, one could eradicate these diseases by destroying the plants in which they live.

Sanitation. Removing dead and diseased perennial plant material from the garden is called sanitation. Sanitation is best done in early winter after a hard freeze has killed the foliage. Cutting out and destroying or composting all the old leaves, stems and vegetation of perennials in the garden gets rid of next year's sources of blights, leaf spots and stem decays. For some diseases, roots and soil need to be gently lifted with a spading fork and destroyed. What about composting? In general, diseased plant material can be composted and added back to the garden without much fear of re-contamination provided that composting is carefully done and that the wastes are

completely decomposed to humus.

Diseases managed by sanitation. There are several important diseases in perennial flowers that are reduced by end-of-the-season sanitation. The following is a partial list.

- Daylily rust. This disease was found for the first time in four Kentucky counties (Fayette, Kenton, Hart, and Warren) between July 16 and September 28, 2001. Whether rust is present in the garden or not, wait until freezing temperatures kill back the daylily foliage and then cut back and remove all foliage from the garden. Do this before snow covers the garden for extended periods.
- Bacterial and fungal leaf spots of iris. Cut the leaves and stems back to the ground and remove them from the garden. These leaves may be composted.
- Red spot and Botrytis blight of peony. Cut off old leaves and stalks down to the ground and remove them from the garden.
- Powdery mildew and leaf spots of phlox, rudbeckia, and other hosts. After foliage has frozen, remove and compost stems and leaves of infected plants.
- Pachysandra leaf blight. Lift out and destroy severely infected plants.
- Aster yellows phytoplasma of daisies and many other garden plants. Remove and destroy infected plants.
- Virus diseases of chrysanthemum, dahlia and other plants. Remove and destroy infected plants.
- Foliar nematodes of chrysanthemum, hosta, and other perennials. Cut off and destroy infected plants and plant parts.
- Crown rot of hosta, ajuga, and other perennials. Crown rot, caused by the fungus *Sclerotium rolfsii*, the southern stem blight fungus, affects up to two dozen garden perennials from ajuga to viola. For crown rot, special sanitation measures are needed. Gardeners need to carefully dig up and remove infested soil along with the infected plant in order to get rid of the overwintering sclerotia which may be in the soil. Do not compost crown rot-infected plants.

PESTICIDE NEWS AND VIEWS

REMINDER ON STATUS OF DIAZINON, CHLORPYRIFOS (DURSBAN AND LORSBAN)

On December 5, 2000, EPA announced an agreement to phase-out diazinon, one of the most widely used pesticides in the United States, for indoor uses, beginning in March 2001, and for all lawn, garden and turf uses by December 2003.

Specifically, the terms of the agreement implement the following phase-out schedules:

! For the indoor household use, the registration will be canceled on March 2001, and all retail sales will stop by December 2002.

! For all lawn, garden and turf uses, manufacturing stops in June 2003; all sales and distribution to retailers ends in August 2003. Further, the company will implement a product recovery program in 2004 to complete the phase out of the product.

! Additionally, as part of the phase out, for all lawn, garden, and turf uses, the agreement reduces the manufacturing amounts. Specifically, for 2002, there will be a 25 percent decrease in production; and for 2003, there will be a 50 percent decrease. Also, the agreement begins the process to cancel around 20 different uses on food crops.

Chlorpyrifos (Dursban)

It is legal to purchase and use chlorpyrifos products according to label directions and precautions. Use of these products according to label directions does not pose an imminent hazard. Consumers should know that the EPA took this action to protect children. Consumers who choose to use the product should take special care to always read and follow the label precautions and directions. If consumers choose to discontinue use, they should contact their state or local hazardous waste disposal program or the local solid waste collection service for information on proper disposal.

Dursban - Changes to residential uses (home, lawn and garden uses as well as uses in schools, parks, daycare centers, and commercial buildings, except limited public health uses)

Cancel and phase out nearly all indoor and outdoor residential uses to effectively eliminate the use of Dursban (chlorpyrifos) by homeowners, limiting use to certified, professional, or agricultural applicators. Those uses that pose the most immediate risks to children will be canceled first, including home lawn, indoor crack and crevice treatments, and whole-house post-construction termiticide treatments

Cancel uses in schools, parks, and other settings where children may be exposed.

Sale of products for these uses listed above will end 12/31/01. Over the next several years, remaining uses, including spot and local termiticide treatments and pre-construction termiticide applications, will be phased out.

LORSBAN REREGISTRATION MILESTONE ACHIEVED FOR DOW AGROSCIENCES- 17-YEAR REVIEW NEARS COMPLETION

INDIANAPOLIS - Dow AgroSciences announced that Lorsban* insecticides have cleared a major regulatory hurdle now that the interim reregistration eligibility decision (IRED) for these products has been signed by the U.S. Environmental Protection Agency (EPA). Under U.S.

law, all pesticides registered prior to 1984 must undergo reregistration, an evolving health and safety review process that often takes a decade or more as regulators demand new scientific data to address existing and hypothetical concerns.

"Under this new U.S. reregistration action, our Lorsban business remains intact with all of its agricultural uses maintained," said Stan Howell, Dow AgroSciences vice president for crop insecticides.

"What the signing of the IRED means," Howell said, "is that the health and environmental aspects of these products have been thoroughly evaluated by the EPA, and farmers and professional applicators can continue to use these products with confidence."

A major focus of the IRED is a "label improvement proposal," Howell said, "that reflects how Lorsban products are actually used in today's agriculture. The new labeling also introduces buffer zones and retreatment intervals for added environmental protection, and contains provisions to further reduce potential exposures to agricultural workers.

"In the coming year," Howell said, "EPA will conduct one last risk assessment for the entire family of organophosphate insecticides, a group of products which includes chlorpyrifos. However, through these and previous label modifications, Lorsban products have already met regulatory provisions for reducing potential exposure, and we expect remaining uses of the product to be well positioned for the final review."

