



KENTUCKY PEST NEWS

ENTOMOLOGY & PLANT PATHOLOGY & WEED SCIENCE

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ANNOUNCEMENTS

2002 IPM TRAINING SCHOOL

Mark your calendar now for the 2002 IPM Training School! Scheduled for March 20, the meeting will be held at the UK Research Center in Princeton. Registration will open at 8:30 AM with the meeting starting at 9:00AM and ending at 3:30 PM.

Pest identification will be a major part of the training school. Weed, insect and disease problems of corn, soybeans, small grains and alfalfa will be covered. An update of pest problems in Kentucky will include the following topics: Biology of Key Corn Diseases, Insect Damage in High Oil Corn and The Soybean Aphid in Kentucky. Also, the new computer program being used by the University of Kentucky Soil Testing Laboratory will be demonstrated.

Advance registration is not needed and the meeting is open to the public free of charge. The program has been accredited for 5.5 CEU's for Certified Crop Advisors. For additional information contact Patty Lucas at 270 - 365-7541 extension 218 or plucas@uky.edu.

MANAGE GRAPE DISEASES WITH RESISTANT VARIETIES

by John Hartman

Diseases often limit yields and profitability for Kentucky grape growers and adversely affect sustainability of the Kentucky grape industry. To manage grape diseases it is important to use all strategies for disease management including disease-suppressing cultural practices, chemical management, and resistant varieties. For some diseases, especially soil-borne diseases, resistant varieties are the most effective means of control. Thus, in any integrated disease management program, the use of grape varieties with disease resistance must be emphasized. At this time of year, growers are placing orders for nursery stock that will be used in their commercial or back-yard grape plantings. Variety choices should include consideration of disease resistance. For established plantings, this information should be helpful for managing grape diseases.

Many commercial grape cultivars have good resistance and/or tolerance to diseases such as black spot, cane and leaf spot and mildews. The more disease resistance incorporated into grape plantings, the better. The following table lists ratings for disease resistance in several of the more commonly grown cultivars. The table was derived from the Midwest Small Fruit Pest Management Handbook, Bulletin 861, a Cooperative Extension Service publication available at County Extension offices statewide. Most nurseries should be able to provide information on disease resistance for the cultivars they sell.

FRUIT CROPS



Table 7. Relative disease susceptibility and sulfur, and copper sensitivity among grape cultivars.

The relative ratings in this chart apply to an average growing season under conditions usually favorable for disease development. Any given cultivar may be more severely affected.

Cultivar	Susceptible or sensitive to:										
	BR	DM	PM	Bot	Phom	Eu	CG	ALS	Sul ¹	Cu ²	
Aurore	+++	++	++	+++	+	+++	++	+++	No	++	
Baco Noir	+++	+	++	++	+	++	+++	++	No	?	
Cabernet Franc	+++	+++	+++	+	?	?	+++	?	No	?	
Cabernet Sauvignon	+++	+++	+++	+	+++	+++	+++	?	No	+	
Canadice	+++	++	+	++	?	?	++	++	?	?	
Cascade	+	+	++	+	++	++	+	?	No	?	
Catawba	+++	+++	++	+	+++	+	+	+	No	++	
Cayuga White	+	++	+	+	+	+	++	++	No	+	
Chambourcin	+++	++	+	++	?	?	++	?	Yes	?	
Chancellor	+	+++	+++	+	+++	+	+++	+++	Yes	+++	
Chardonnay		++	+++	+++	+++	+++	++	+++	++	No	+
Chelois	+	+	+++	+++	+++	+++	++	+++	No	+	
Concord	+++	+	++	+	+++	+++	+	+	Yes	+	
Cynthiana/Norton	+	++	+	+	+	?	+	?	Yes	?	
DeChaunac	+	++	++	+	+++	+++	++	+++	Yes	+	
Delaware	++	+++ ³	++	+	+++	+	+	+	No	+	
Dutchess	+++	++	++	+	++	+	++	+	No	?	
Elvira	+	++	++	+++	+	+	++	++	No	++	
Einset Seedless	+++	++	+++	+	?	?	+	?	?	?	
Foch	++	+	++	+	?	+++	+	+	Yes	?	
Fredonia	++	+++	++	+	++	?	+	+	No	?	
Gewürztraminer	+++	+++	+++	+++	?	?	+++	+	No	+	
Himrod	++	+	++	+	?	?	?	+	No	?	
Ives	+	+++	+	+	?	++	+	+	Yes	?	
Limberger	+++	+++	+++	+	?	+++	+++	?	No	?	
Maréchal Foch	++	+	++	+	?	+++	?	+	Yes	?	
Melody	+++	++	+	+	?	?	?	?	No	?	
Merlot	++	+++	+++	++	+	+++	+++	?	No	++	
Moore's Diamond	+++	+	+++	++	?	++	?	?	No	?	
Muscat Ottonel	+++	+++	+++	++	?	+++	+++	?	No	?	
Niagra	+++	+++	++	+	+++	+	++	+	No	+	
Pinot gris	+++	+++	+++	++	?	+++	+++	?	No	?	
Pinot Meunier	+++	+++	+++	+++	?	+++	+++	?	No	?	
Pinot blanc	+++	+++	+++	++	?	?	+++	?	No	+	
Pinot noir	+++	+++	+++	+++	?	?	+++	+	No	+	
Reliance	+++	+++	++	+	++	?	?	?	No	+	
Riesling	+++	+++	+++	+++	++	++	+++	+	No	+	
Rosette	++	++	+++	+	++	++	++	++	No	+++	
Rougeon	++	+++	+++	++	+++	+	++	+++	Yes	+++	
Sauvignon blanc	+++	+++	+++	+++	?	?	+++	?	No	+	
Seyval	++	++	+++	+++	++	+	++	++	No	+	
Cultivar	Susceptible or sensitive to:										
	BR	DM	PM	Bot	Phom	Eu	CG	ALS	Sul ¹	Cu ²	
Steuben	++	+	+	+	?	?	+	++	No	?	
Vanessa	+++	++	++	+	+	?	+	?	?	?	
Ventura	++	++	++	+	+	?	+	+++	No	?	

Vidal blanc	+	++	+++	+	+	+	++	+	No	?
Vignoles	+	++	+++	+++	++	++	++	++	No	?
Villard noir	?	+	+++	+	?	?	?	?	?	?

Key to susceptibility or sensitivity: BR=black rot; DM=downy mildew; PM=powdery mildew; Bot=Botrytis; Phom=Phomopsis; Eu=Eutypa; CG=crown gall; ALS=angular leaf scorch; Sul=sulfur; Cu=copper.

Key to ratings: +=slightly susceptible or sensitive; ++=moderately susceptible or sensitive; +++=highly susceptible or sensitive; No=not sensitive; Yes=sensitive; ?=relative susceptibility or sensitivity not established.

¹ Slight to moderate sulfur injury may occur even on tolerant cultivars when temperatures are 85 degrees or higher during or immediately following the application.

² Copper applied under cool, slow-drying conditions is likely to cause injury.

³ Berries not susceptible.

LAWN & TURF

TWO NEW BROWN PATCH FUNGICIDES by Paul Vincelli

Two new fungicides have become available recently for turf disease control, both of which have active ingredients with new chemistries for the turf area. A summary of each is provided.

Endorse 2.5WP®

This product is marketed by Cleary Chemical Corporation. It is labeled for control of brown patch and large patch caused by *Rhizoctonia* species. Endorse 2.5WP® is for use on golf courses, home lawns, parks, and commercial and institutional grounds. It is specifically *not* labeled for use on turf being grown for sod.

I have reviewed efficacy data from a number of experiments, including those conducted at the University of Kentucky. Endorse 2.5WP® consistently provided very good to excellent control of brown patch in those tests when used at the labeled rate and timing, so control of this disease is clearly a strength of this product. I have found the level of control of large patch of zoysia to be poor in the two tests I have reviewed.

Endorse 2.5WP® contains the active ingredient *polyoxin D*. Polyoxin D is in the chemical family called “polyoxins”, which have been used since 1967 for controlling sheath blight of rice in Japan. Polyoxin D is absorbed by leaves, and can move across to the other side of the leaf (translaminar movement). To my knowledge, it does not move upward or downward in plants, so polyoxin D is apparently a local penetrant only.

Polyoxins inhibit fungal growth by repressing a particular enzyme that synthesizes chitin, an important constituent of certain fungal cell walls. As with all fungicides with a specific biochemical mode of action (also called “site-specific fungicides”), there is a risk of development of pathogen strains that are insensitive (=resistant) to the fungicide. It is worth noting that strains of *Rhizoctonia solani* resistant to site-specific fungicides has not been reported, to my knowledge, and this product have been used for over three decades. Nevertheless, it is wise to be cautious with the use of all site-specific fungicides. Rotation and tank-mixing among products with different modes of action may help slow the development of resistant subpopulations.

Medallion 50WP®

Medallion 50WP® is marketed by Syngenta Corporation. It is labeled for control of brown patch, bentgrass dead spot, leaf spot, summer patch, yellow patch, gray snow mold, and pink snow mold, as well as several diseases of ornamentals. The Medallion 50WP® label has a restriction to apply no more than 1.5 oz/1000 sq ft per year on turfgrass.

Medallion 50WP® has been tested widely against certain diseases and moderately so against others. The product has provided excellent control of brown patch and pink snow mold in a number of published tests. Its performance against yellow patch has been erratic in the few published tests available to me. Published testing on the efficacy of Medallion 50WP® against leaf spot and summer patch is too limited for me to make a reasoned evaluation at this time. Gray snow mold is not a significant problem in Kentucky, and bentgrass dead spot has not yet been reported in the Commonwealth.

Medallion 50WP® contains the active ingredient

fludioxonil. Fludioxonil is in the phenylpyrrole chemical family. It is a contact (=protectant) fungicide, the first new contact fungicide in several decades. Fludioxonil inhibits a particular enzyme in the synthesis of glycerol, a component of all fats and oils. As such, fludioxonil is a site-specific fungicide with a significant risk of resistance. As mentioned before, for all site-specific fungicides, rotation and tank-mixing among products with different modes of action may help slow the development of resistant subpopulations.

LIVESTOCK

NEW EARTAGS FOR PASTURE FLY CONTROL

By Lee Townsend

Two new insecticide ear tags for beef and non-lactating dairy cattle have been released by Bayer Animal Health. They are labeled for control of horn flies and reduction of face flies. Both insects are important pests of pastured cattle in Kentucky. The tags contain either organophosphate or synthetic insecticides and are designed for annual rotation to reduce the chance of insecticide resistance in horn flies.

The Co-Ral Plus tag uses two organophosphate insecticides - Co-Ral (coumaphos) and Diazinon. These white tags contain 20% liquid diazinon and 20% Co-Ral in a new manufacturing process that allows longer and more thorough release of the insecticides. The blue-violet CyLence Ultra tags contain beta-cyfluthrin, a synthetic pyrethroid insecticide.

When pesticides with the same mode of action are used repeatedly to control some pests, resistance to that whole class of active ingredients may develop. There have been many documented cases of horn flies developing resistance to specific classes of insecticides in the US. Marketing of a pair of insecticidal ear tags that can be used in alternate years provides a means of addressing resistance within a product line.

The tagging rate for both products directs one tag per animal for adequate horn fly control or two tags per animal for maximum horn fly control and optimum reduction of face flies. Calves less than 3 months of age should not be tagged because ear damage may occur. See the product label for complete information.

ALFALFA

VERY EARLY WEEVIL DEGREE DAY ACCUMULATIONS

by Lee Townsend

Degree day accumulations (base 48° F) are important in anticipating alfalfa weevil development. As of February 14, totals across southern Kentucky are just above 100. The accumulation of 190 degree days (beginning Jan 1) is the time when we can look for the first signs of feeding activity in alfalfa tips. By this point, some of the fall-laid eggs are beginning to hatch and signs of feeding in the tips could be visible.

Keeping track of degree days over the next few weeks will be important in preventing surprises from alfalfa weevils. It is a mistake to treat too early—especially at the first sign of feeding in a field. Most of our potential feeding damage comes from spring-laid eggs that will hatch considerably later than those laid in the fall. Follow the degree day charts and use the 30 stem sampling technique for accurate decision-making information.