



KENTUCKY PEST NEWS

ENTOMOLOGY • PLANT PATHOLOGY • AGRONOMY

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TOBACCO

ANNOUNCEMENT

1999 IPM Scout Training School

A training session on Integrated Pest Management (IPM) scouting procedures and pest identification will be March 24 from 9 a.m. to 3:30 p.m. central time at the University of Kentucky's Research and Education Center in Princeton. Those attending the program will learn how to identify weeds, insects and diseases of corn, soybeans, small grains and alfalfa and the procedures to use when scouting fields for pests.

Farmers, agribusinessmen, crop consultants and others who make pest management decisions or give advice can benefit from the IPM Training School. The program is free and open to the public.

The meeting has applied to offer five CEU's for certified crop advisers. For more information contact Patty Lucas at 502/365-7541 extension 218 or by e-mail at plucas@ca.uky.edu

REGISTRATION OF A NEW TOBACCO FUNGICIDE - ULTRA FLOURISH

By William Nesmith

Ultra Flourish is a new fungicide that received a Section 3 (national) registration by EPA on Nov. 24, 1998. This fungicide is sold by Agtrol International of Houston, Tx. Apparently, it is a generic version of Ridomil Gold (that is it has the same active ingredient (a.i.), called mefenoxam) and will be labeled for about the same uses now covered by the Ridomil Gold's label. However, Ultra Flourish is a 2EC formulation (2 lbs a.i./gallon) while Ridomil Gold is a 4EC (4 lbs a.i./gallon).

We will not include Ultra Flourish in our tobacco recommendations until data from local efficacy and phytotoxicity studies are available. I have no experience with this material and find nothing in the literature or from colleagues in other states covering evaluation of Ultra Flourish, but it may have been evaluated under a code name.

Moreover, even though it may have the same active ingredient as Ridomil Gold, it is not the same formulation, and formulation differences sometimes can greatly impact efficacy. For example, I recall finding great differences in efficacy and phytotoxicity among the various experimental formulations of Ridomil (metalaxyl) during the evaluation period with that

chemistry. Even though the various formulations contained the same a.i. and adjustments were made to insure the same rate of a.i. in the test, large differences in performance were sometimes noticed, especially in crop phytotoxicity and persistence of control.

Our plans are to conduct replicated side by side evaluations of Ultra Flourish and Ridomil Gold during the 1999 season. Since both are labeled products these can be done as demonstrations plots at field day sites and viewed by the public.

CORN

INSECT MANAGEMENT, A PLACE TO WATCH CORN INPUT COSTS

By Ric Bessin

While grain prices remain low, corn producers need to be managing input costs for 1999 very closely. One important method to reduce input costs is to rely more IPM and less on preventive control of insect pests. IPM became popular among producers because it helps to prevent pest resistance and on average reduces overall production costs. In this article, I will discuss the management options for some of the key insect pests in Kentucky corn fields.

Corn rootworm: In general, only a small percentage of corn in Kentucky is treated for either western or northern corn rootworm. The most effective strategy for managing both of these pests is crop rotation. Beetles lay eggs in corn fields late in the summer and those eggs lie dormant until the following spring. Crop rotation breaks the life cycle of this pest because when the eggs hatch, there is no corn to feed on.

Cutworms: Black cutworm remains one of the most troublesome insect pests of corn in Kentucky. Cool, wet spring conditions can lead to economic losses from this insect; particularly in fields with excessive winter weed growth or crop residue. But in general, more fields are treated for this insect than need to be. The most cost efficient method to control this insect is through field monitoring and the use of rescue treatments only when necessary. Producers should have their fields scouted at least twice from a week after emergence until the corn is 12 to 18 inches in height and use 3% cut plants as the threshold for treatments.

European corn borer: Despite the great interest and

deployment of the Bt corn hybrids, on average ECB is still below treatment levels in most Kentucky corn fields. Our experience has shown us that ECB populations run on a cycle, with high levels 2 out of every five years. Generally, monitoring fields and treating when ECB exceed economic thresholds (see ENT-49) is still the most economical strategy. In my opinion, planting Bt corn on a 'normal' planting date (read that as not an early or a late planting) just for ECB control is of questionable value. However, early planting relative to the other fields in the area or late planting after the middle of May does predispose fields to greater ECB pressure and can justify the use of Bt corn where ECB has been a problem in the past.

Southwestern corn borer: This insect has become a much greater pest to Kentucky corn over the last three years. Many producers in counties along the Ohio and Mississippi Rivers reported significant levels of lodged corn at harvest due to SWCB. In the western region of the state, SWCB is a serious threat to corn planted after May 1. As with the ECB, producers should monitor fields and use rescue treatments when necessary. Currently, we are recommending 35% of the plants infested with young larvae in the whorl as the economic threshold for SWCB. However, where corn will be planted later and there has been a history of SWCB, producers may want to consider the use of Bt corn. Studies conducted at the UK Princeton REC have shown that the YieldGard and StarLink Bt corn hybrids provide excellent protection against late-season SWCB attack.

FEW KENTUCKY CORN FIELDS NEED NEMATODE TREATMENT

By Paul Vincelli

Many Extension agents are aware of the substantial yield losses that the soybean cyst nematode can produce. A number of agents recently have asked whether nematicides-pesticides that kill nematodes-have a place in Kentucky corn production. Recent promotional literature for Counter® CR® systemic insecticide implies that, in field corn, nematodes can also commonly pose a significant risk to yield.

It is true that nematodes can be found in every soil type, although most nematodes are harmless and do not attack crop plants. It is also true that if the numbers of crop-attacking nematodes in the soil are high enough, these nematodes can significantly

reduce yields, especially when a crop is under stress from drought or low fertility. However, past research at UK suggests that it is uncommon for damaging levels of corn-attacking nematodes to be reached in our production fields.

Several factors are at work here. For one, nematodes that attack corn are generally most destructive in sandy soils. Sandy soils are porous and permit greater freedom of movement for the nematode. They allow more gas exchange, and nematodes appreciate oxygen. Sandy soils usually drain more quickly than heavier soils, which also favors nematode buildup. And sandy soils dry out quickly in a drought, which aggravates the water deficit of plants whose roots have been attacked by nematodes. Yet most of our field corn is grown in textural classes of silty loams and heavier.

Another factor to consider is that most of our field corn is grown in rotation, which helps to keep nematode numbers to non-destructive levels. Third, corn can tolerate high numbers of nematodes without damage. Previous researchers at UK could find very high numbers of nematodes in corn fields which were in excellent health. The corn plant can simply sustain large numbers of nematodes on its roots without much effect on plant health.

Previous UK studies in corn have not shown an economically favorable return from the use of nematicides in corn. There is no reason to believe that Counter CR insecticide should be used routinely for nematode control in Kentucky corn fields.

SMALL GRAIN

WINTER WEATHER AND WHEAT APHIDS by Doug Johnson

Many of you know my friend and colleague Dr. Lloyd Murdock. Lloyd had as a seasonal poster on his door that says “Be of Good Cheer Winter is Here”. Given the travel problems, increases in heating bills and the often ugly nature of winter in Kentucky, we may not be taking the advice offered by this poster. However, in at least one sense it is just what we need.

This weather keeps aphids from and reproducing. It can kill aphids. All of these things can be money in the bank for a good pest manager. We had a very warm fall which SHOULD HAVE, BUT DID

NOT result in a large aphid population. This is probably because of the very hot and DRY August and September. We did see a few aphids just before Christmas but those numbers were pretty small. So, this winter weather should really keep the aphid populations very small and very localized. This gives us the best ‘un-paid-for’ pest control we could obtain.

Never fear, no matter what the weather, we are likely to see a few aphids as spring weather approaches. Although it is highly suspect whether BYDV vectored after Growth Stage 3 is worth controlling, you may still wish to check to see if very large numbers of aphids appear.

HOUSEHOLD

GNATS USUALLY GNOT A BAD PROBLEM By Lee Townsend

Several samples of small gnats have been sent in to the Insect Identification Lab over the last two weeks. Some have been described as being around potted houseplants, others apparently were just “hanging out”. The larvae of these small, non-biting flies develop in moist to wet areas with a lot of organic matter. Over-watered houseplants are prime source. The gnats typically live only a few days and die. They can be dealt with using a soapy rag to wipe them off of window sills or table tops. Long term management means letting potted plants dry out more between waterings.

SHADE TREES AND ORNAMENTALS

VERTICILLIUM WILT OF LANDSCAPE TREES AND SHRUBS By John Hartman

Verticillium wilt, caused by the fungus *Verticillium dahliae* causes dieback and death of many woody plants in the landscape. *Verticillium* invades susceptible trees and shrubs by way of the root system. The fungus resides in the soil and is preserved there in the form of sclerotia which resist degradation for many years. Thus, if a plant has died in the landscape from this disease, the wilt fungus can remain there until another susceptible plant becomes available.

The best means of management for this disease is to plant resistant species and cultivars. If Verticillium wilt disease has been diagnosed in the landscape,

select from the following lists when making decisions for replanting.

The following woody plants are susceptible to Verticillium wilt:

ash	nandina
azalea	Russian olive
barberry	osage orange
boxwood	Jap. pagoda tree
brambles	persimmon
buckeye	privet
catalpa	redbud
cherry	rose
Ky. coffee tree	sassafras
cork treecurrant	serviceberry
elder	smoke tree
elm	sumac
golden-rain tree	tree-of-heaven
honeysuckle	tulip tree
horse chestnut	tupelo
lilac	viburnum
black locust	weigela
magnolia	yellowwood
maple	

The following woody plants are resistant to Verticillium wilt.

apple	larch
mountain ash	linden
beech	honey locust
birch	mulberry
chestnut	oak
crabapple	pawpaw
cypress	pear
dogwood	pecan
fir	poplar
firethorn	pine
ginkgo	flowering quince
sweetgum	rhododendron
hackberry	spruce
hawthorn	sugarberry
hickory	walnut
holly	willow
hornbeam	yew
juniper	zelkova

Although maples are generally considered to be susceptible hosts, the following Norway maple cultivars are tolerant or resistant to Verticillium wilt: 'Columnare Compacta', 'Jade Glen', and 'Parkway'. Norway maples with intermediate tolerance to the disease include: 'Emerald Queen', 'Schwedleri', 'Silver Variegated', 'Summershade',

and 'Superform'. Norway maples susceptible to Verticillium wilt include: 'Cleveland', 'Crimson King', 'Globosum', 'Greenlace', and 'Royal Red'.

PESTICIDES NEWS AND VIEWS

CONVICTIONS OF ILLEGAL PESTICIDE SALES AND USE

By Monte P. Johnson

Last fall, EPA's Criminal Investigation Division reported the following convictions for illegal pesticide sales and/or use:

- Robert Bell of Alexandria, Louisiana, pleaded guilty to illegally distributing methyl parathion, a restricted-use insecticide, to residents at a low-income apartment complex in Alexandria. Bell faced a maximum of three years in prison and/or fines of up to \$300,000.
- James Allen of Chicago, Illinois, was sentenced to one year in prison for having conspired with Reuben Brown, also of Chicago, in a scheme that involved the illegal use of the restricted-use insecticide, methyl parathion, to control cockroaches in homes.
- Robert Kelly, Jr. of Memphis, Tennessee was convicted of illegally applying methyl parathion in homes in the Memphis area. The cost of testing individuals, homes and businesses for methyl parathion and the cost of relocating families in this case has exceeded \$2 million. Kelly was sentenced to 20 months in prison and must pay \$250,000 in restitution to the EPA.
- Emmanuel Johnson of Independence, Louisiana, was convicted on two counts of selling and distributing methyl parathion for illegal indoor uses. Johnson faced a maximum sentence of up to two years in prison and/or fines of up to \$200,000. He could also be required to pay restitution for damages suffered by victims.

SIMPLE RESOLUTION FOR 1999

By Lee Townsend

"Always follow the label". These four simple words can make an excellent 1999 New Year's resolution for all pesticide applicators. Pesticide stewardship is a major issue for agriculture and horticulture. Responsible use of these products is essential to keep input costs in line; produce

optimum quality and yield; protect ourselves, workers, and the environment; bolster consumer confidence in our products; and ensure that we have the pesticide tools that are needed to manage problems. Conscientious use of the pesticides, according to their labels, is a key to achieving this.

Improper use of pesticides can cause crop injury, illegal (and sometimes dangerous residues), ineffective control, loss of products, and in some cases, severe economic penalties. Labels provide complete instructions on rates and application methods. Labeled pesticides have been tested on the crops so there is little chance for injury when directions are followed. Also, the effectiveness of the product against specific pests is generally clearly stated on the label. Frequently, there is research data to support these claims. In some cases, the use patterns and limitations of pesticide applications are set to reduce the potential for the development of resistance in pest populations. It can prolong the life of classes of pesticides and allow others to make it to the market place. Following rate directions and harvest intervals will ensure that residues will be within tolerance levels at harvest.

Four simple words, "Always follow the label". Sounds simple enough - simply important.

FARM CHILDREN AND AG PESTICIDES **By Lee Townsend**

The National Resources Defense Council released the report *Trouble on the farm: growing up with pesticides in agricultural communities*. The report alleged that farm children, or those living near farms in the US have a high risk for adverse health effects from exposure to ag chemicals. Specific risks are acute poisonings, cancer, and learning and memory problems. Specific reasons include their smaller body size, "hand-to-mouth" habits, they are in their crucial development stages.

The Agromedicine Program of South Carolina has a pesticide poisoning database that covers 25 years of surveillance in the state. The most recent studies (1992-96) indicated that 112 people were hospitalized during that period due to pesticide poisoning; 31 were children. Most (29) were less than six years old and apparently had ingested non-ag pesticides in the home. Most cases involved rodenticides. A 1-year old infant was hospitalized following respiratory exposure to a home pesticide

application. The sole ag-associated poisoning came after a 14-year old walked through a crop field recently treated with an insecticide.

Hopefully, the data from South Carolina are comparable to our situation here in Kentucky. Children are certainly vulnerable to pesticides in any environment. There is no doubt that chances of exposure to pesticides on the farm is great. More important, the consistent message from these studies is pesticide safety begins in the home. Pesticides and children don't mix. Careless storage is a major concern. That's why all pesticide labels carry the warning "Keep out of reach of children". (From Caldwell, S. T., et al., *Hospital pesticide poisonings decline in South Carolina, 1992-1996*. *Journal of South Carolina Med Assoc* 93:448-452. 1997)

EPA SEEKS COMMENTS ON RISK ASSESSMENTS **By Monte P. Johnson**

In Food Quality Protection Act (FQPA) related activities, the Environmental Protection Agency (EPA) is seeking comments on preliminary risk assessments for several organophosphate (OP) pesticides.

- On January 15, 1999, the EPA released assessments on seven OPs including chlorethoxyfos, ethyl parathion, methidathion, phosmet, propetamphos, tetrachlorvinphos, and azinphos-methyl. Comments must be submitted by March 16, 1999.
- On January 8, 1999, the EPA released assessments on five OPs including acephate, disulfoton, methamidophos, oxydemeton-methyl, and pirimiphos-methyl. Comments must be submitted by March 9, 1999.
- On December 18, 1999, the EPA released assessments on four OPs including methyl parathion, ethoprop, temephos, and terbufos. Comments must be submitted by Feb. 15, 1999.

More information concerning OP assessments can be found at the website:
<<http://www.epa.gov/pesticides/op/>>. Electronic comments should be addressed to <opp-docket@epa.gov>. Copies of both the preliminary risk assessments and related documents may also be obtained by calling the EPA Office of Pesticide Programs (OPP) Pesticide Docket at 703-305-5805,

or writing or visiting the Docket at the Public
Information and Records Integrity Branch, Room
119, Crystal Mall 2, 1921 Jefferson Davis Highway,
Arlington, VA. (EPA, OPP, 1-15-99)

Lee Townsend, Extension Entomologist

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