



KENTUCKY PEST NEWS

ENTOMOLOGY • PLANT PATHOLOGY • AGRONOMY

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BLUE MOLD WEB PAGE

By William Nesmith, Rod Hillard, and Lee Townsend

The Kentucky Blue Mold Warning System is now on the web. Its URL address is:
<http://www.uky.edu/Agriculture/kpn/kyblue/kyblue.htm>

This web site contains the Current Blue Mold Status Report for Kentucky along with information on the biology and control of blue mold. To assist in remaining current with this rapidly changing disease, this site is linked directly to Kentucky's Agricultural Weather Web Site and the North American Blue Mold Forecast System Web Site at North Carolina State University. It is also linked to the Kentucky Pest News and the Department of Plant Pathology which jointly operate the site.

The site is still under construction, so some details are still being modified. However, we feel its value currently justifies becoming operational now. Your

understanding and cooperation will be appreciated during the start-up phase.

NEW ENTFACTS AVAILABLE ON THE WEB

By Ric Bessin

The following new ENTFACTS are being added to the Entomology Department Web site as PDF files. County offices should use these to produce camera-ready copies for distribution. Other camera-ready copies will not be sent to the offices.

Entfact 123 Predicting insect development using degree days

Entfact 124 Vendors of microbial and botanical insecticides and insect monitoring devices

Entfact 125 Vendors of beneficial organisms in North America

Entfact 126 Corn leaf aphid

Entfact 127 Alfalfa weevil field sampling program

Entfact 215 Leafhoppers on apples

Entfact 438 Spider mites on landscape plants

Entfact 439 Sowbugs and pillbugs

Entfact 440 Bagworms on landscape plants.

CORN

COOL WET WEATHER GOOD FOR CUTWORMS

By Ric Bessin

Recent cool weather has slowed corn growth, however, it has not completely stopped the damage caused by cutworms. Cutworms have a lower threshold temperature for development than corn, which means that they can continue to cut plants at temperatures below which corn can develop. This means that conditions in parts of the Commonwealth favor increased damage by cutworms. When weather conditions allow for rapid corn development, corn can more quickly grow out of stages vulnerable to cutworm attack. Fortunately, cutworm pheromone trap catch numbers have been moderate this spring.

Producers and consultants should monitor fields regularly for cutworms until corn reaches a height of 18 inches. If 3% or more of the plants are cut and 2 or more 1 inch or smaller cutworms are present per 100 plants, then growers are advised to apply an insecticide for cutworm control.

BT-CORN REFUGES

By Ric Bessin

Recent wet weather has postponed corn planting for many producers. Producers that are using Bt-corn are reminded to plant 20 to 30% of their corn acreage to non-Bt hybrids as part of their resistance management plan. If Bt-corn was planted early and will be planted again when fields dry sufficiently, then non-Bt refuges need to be planted for each of these planting dates, as well. Keep in mind that each producer using Bt-corn must have a non-Bt corn refuge on their farm, it is not sufficient to rely on neighboring farms as non-Bt corn refuges for resistance management.

Besides planting refuges with every Bt-corn planting date, producers need to manage those refuges the same as the Bt-corn. That means that fertility management and weed control needs to be similar among Bt-corn and non-Bt fields. For more information on Bt-corn, see ENTFACT-118, "Bt-corn", on the Entomology web site.

EARLY-SEASON WEED MANAGEMENT TIPS FOR CORN AND SOYBEAN PRODUCERS

By J. D. Green

One of the critical inputs in crop production is adequate weed control. Therefore, herbicides are used in corn and soybean production to maintain economical weed control throughout the growing season. Highlighted below are some important aspects to consider when implementing our weed management programs.

- 1) Choosing the right herbicide or herbicide combination. The most effective herbicide product(s) to use will depend on the type of weeds present. Knowing the field history of past weed problems will enable crop producers to pick herbicide products that will be the most effective for both the common and most troublesome weeds that are present in each field. For no-till fields it is important to choose a "burndown" herbicide option that will adequately control the vegetation that is present at the time of corn or soybean planting.
- 2) Application Rate. The application rate for each herbicide depends on the soil characteristics, the type of weeds present, the tank mixture, and/or the stage of crop growth. In addition, the spray volume (or gallons per acre) may need to be altered depending on the herbicide products to be applied.
- 3) Timing of the herbicide application. With the wide array of herbicides available crop producers can choose either between weed control programs that rely more on a soil-applied or mostly a postemergence method of application, or a combination of both. In general, soil-applied herbicides must be applied before weeds emerge; whereas, optimum control with postemergence herbicides are obtained when applied to weeds that are small and actively growing. Applying herbicide treatments at the right time is just as important as picking the right herbicide or combination of herbicide products to use.
- 4) Use of herbicide tolerant crops as weed management tools. There has been an increasing interest in planting crops that are genetically tolerant to use of specific herbicides. It is extremely important to mark fields and keep good records of where these crops are planted. A misapplied

herbicide to a non-tolerant field can result in severe crop damage or even a total crop loss.

5) Environmental conditions. Weeds that are stressed due to hot/dry weather can be harder to kill. Also, crops under stress have a greater potential for herbicide injury. Other extremes in environmental conditions, such as wet field conditions can prevent applications from being made on a timely basis. Expected rainfall soon after application can wash the herbicide off the plant; thus, reducing the effectiveness of some postemergence products. The rain-free period suggested for many products range from 1 to 8 hours, depending on the herbicide.

6) Drift and nearby susceptible plants. As a general rule, avoid herbicide applications when wind speed exceeds 10 MPH or air temperatures are above 85 F. Under these conditions the potential risk of herbicide injury to nearby susceptible plants is greatly increased due to volatility and/or drift from certain herbicides.

7) Sprayer cleanup. Immediately following a herbicide application the spray equipment should be thoroughly rinsed and cleaned. This includes flushing the tank, hoses, screens, and nozzles with clean water. In some cases running a cleaning solution, such as household ammonia, through the system is needed. Many of the herbicide labels discuss proper sprayer cleanup after use of a product. Sprayer cleanup is critically important when applying a herbicide on one crop and using the same equipment to treat another crop.

In summary, herbicide applications are an effective and economical tool for combating weed problems. However, it is important to select the right herbicide products for the problem weeds in each field, as well as, making the application at the right time. Finally, be aware of environmental conditions before and after the herbicide application, including the potential for off-site spray drift.

SOYBEAN

EARLY SEASON BEAN LEAF BEETLE by Doug Johnson

There are already a few beans in the ground and there will be more in short order. Especially if it stops raining long enough to plant! This weather pattern could present an additional problem to our normal bean leaf beetle (BLB) season. If the

weather stays damp and cool, our soybeans are not going to grow off rapidly. This can increase the affect of BLB damage in the early season.

Normally, under good growing conditions BLB will do very little damage because the plants can add leaves so rapidly. However, if the weather is not good following planting, watch for BLB damage ESPECIALLY on the seed leaves and unifoliate leaves. Once the trifoliates are out BLB's have done about all they can do.

Bean leaf beetles can be found in most soybean fields every year. Damage, however, is relatively rare. Plants should be scouted from emergence to 1st completely unrolled trifoliate. We will see them again from about pod set through pod fill.

Adults are small, about 1/8 to 1/4 inch long. The body is slightly convex and the beetle is longer than wide. Color is variable, ranging from light brown to dark red; spots and/or stripes may be present or absent. All bean leaf beetles will have a backwards pointing black triangle behind the head. Larvae are small worms that live below ground. They are rarely seen.

Adult beetles cause damage primarily by feeding on cotyledons and leaves. Leaf feeding consists of very distinctive, almost circular holes. Cotyledon feeding is very important for these 'seed leaves' furnish the initial food the plant needs to become established.

When scouting, look for stand reduction (cotyledon stage) and heavy leaf feeding while crossing the field. If damage is noticed, try to establish that bean leaf beetle is the problem. In cotyledon stage, defoliation will be obvious and characteristic.

Economic Threshold for seedlings: Control should be considered if 30% stand loss due to cotyledon feeding or 30% defoliation has occurred.

TOBACCO

MORE ON FLOAT PLANT PESTS By Lee Townsend

Shore flies were very abundant in a greenhouse visited late last week. Adults, about 1/8" long, have dark, shiny bodies and red eyes. The single pair of grayish wings are folded scissor-like over the back. There are 5 white spots on each wing, arranged in a 2-2-1 pattern. The first pair of spots are almost touching, the second pair are set much farther

apart.

Shore fly larvae are headless, transparent maggots that have a distinct pair of dark-tipped short breathing tubes at the tail end of the body. Black mouth hooks are used to tear away at algae, their main food, and plant tissue. They can tear small to medium-sized holes on leaves that are in contact with the media.

Orthene may be used for control of the adults. This will be contact kill from direct spray of the flies and perhaps some residual effect as they rest on treated leaves. The maggots are in algal growth on the media and not likely to be affected. In addition, there is an inactive pupal stage which will not be controlled. Insecticide sprays can reduce adult numbers but the problem cannot be eliminated.

Keenan Turner, Pulaski County ag agent reported severe damage to some outdoor float trays caused by earthworms. Large numbers of redworms were found in the float water when some trays were removed to look for the cause of churned up media and uprooted plants. Apparently, excess plastic from the float bed liner provided a bridge from the ground to the trays and large numbers of these worms moved up to escape soils saturated by rains. Once on the trays, the earthworms burrowed into the media and fell through the holes at the bottom of the cells. Consequently, they accumulated in the water. In addition to uprooting plants, earthworms may contaminate the water with microorganisms on or in their bodies.

Many species of earthworms can survive long periods of time (weeks) under oxygenated water. The oxygen content in float bed water is probably relatively low but expect the worms to live for some time. It is unlikely that they will be able to reenter the trays from below.

No chemical treatments are effective in this situation. Be sure that plastic from the bed liners is trimmed so that it doesn't provide an easy means of pest entry. Also, keep a clean, clipped 8" (minimum) border around outdoor floats. This will allow air and sunlight to keep the area relatively dry and prevent potential pests from accumulating and entering easily.

APPROVAL OF ACROBAT MZ FOR KENTUCKY

By William Nesmith

EPA has approved the emergency use of Acrobat MZ in Kentucky for the control of metalaxyl-resistant blue mold. The Supplemental Label was approved by the Kentucky Department of Agriculture on April 30 and a copy has been mailed to each County Extension Office.

Kentucky's label does differ from those approved in other states to date. For the most part, the use directions are identical to those approved in 1997, but there are some differences. Below are some key points:

- * Applications can be made in field and transplant production systems until September 30, 1998.
- * The label must be in the possession of the USER at the time of fungicide application.
- * This is a "Restricted USE Pesticide" in Kentucky. This is a return to the status used in 1996 and reflects record-keeping problems that developed as a result of not having it labeled that way in 1997.
- * Use is PROHIBITED in McCreary County, Ky to prevent possible exposure to the endangered species, Chaffseed.
- * Acrobat MZ is to be applied by ground-operated, high-pressure sprayers in a preventive manner only. The rate section of the label is very clear and well illustrated.
- * Only 4 applications can be made in transplant production systems.
- * In the field, up to 8 applications can be made per crop, but the limit is 10 lbs/acre/season, and with no more than 2.5 lbs/acre per application.
- * Acrobat MZ can be tank-mixed only with Orthene or endosulfan, not changed from last year and a disappointment to many.
- * Under the disclaimers section, is a line acknowledging that mancozeb is a cause of cancer and birth defects. Mancozeb is 60% of the active material in Acrobat MZ, and is also the active ingredient in Dithane DF.

CURRENT BLUE MOLD STATUS

By William Nesmith

Acrobat MZ has been approved under a Specific Emergency Exemption (Section 18) for use in the control of tobacco blue mold until September 30, 1998. See the specific article in this issue for more details. American Cyanamid representatives have informed us that Acrobat MZ product has been moved to local warehouses and distribution/sales areas within Kentucky, so growers should not have difficulty finding the product. County Extension Offices can assist in providing copies of the supplemental label, especially to cover the left-over material from last season, but it is important that dealers obtain the label and provide a copy with each sale.

Metalaxyl-resistant blue mold has been confirmed in Kentucky, Tennessee, Florida, and Georgia. This strain of blue mold has become well established in western Kentucky and west central Tennessee in pre-finished transplants started in Florida and now growing in float and/or greenhouse systems in Kentucky and Tennessee. Until last week all confirmed activity had been associated only with pre-finished plants from Florida, but well trained scouts have found a few new lesions developing within five miles of confirmed outbreaks in locally produced plants. So it is presumed that secondary spread has occurred. Moreover, it should be assumed that any transplants being produced in communities with blue mold may have been exposed to airborne spores from these earlier outbreaks, because most growers with diseased crops have NOT destroyed the infected plants. Massive sporulation has been occurring at each find. Therefore, a state-wide blue mold watch remains for all of Kentucky with warnings for those counties with confirmed activity. I strongly recommend that growers not import transplants from outside their local area and we urge all growers to keep their own transplants protected with a regular fungicide spray program (5 day intervals).

Active blue mold has been confirmed in four counties in western Kentucky (Daviess, Logan, Simpson and Todd) and seven counties in west central Tennessee (Cannon, Cheatham, Macon, Robertson, Sumner, Trousdale and Wilson). Weather conditions over this region have favored secondary spread within the region and to other areas. Recent weather has been ideal for blue mold spread and establishment of infections in transplant

production systems. Forecasted trajectories for spore movement during the past two weeks have indicated Kentucky is being exposed mainly from the blue mold already established in the region. However, the level of disease in Georgia and Florida has become of sufficient volume that it now could be serving as a significant airborne source to Kentucky with changing weather patterns. Blue mold is likely attacking on three fronts!

Laboratory tests conducted thus far have recovered only metalaxyl-resistant strains from the outbreaks. Ridomil has been used at most but not all of the sites that have the disease, even though it is not labeled for this use.

Blue mold is well established in Florida and Georgia and recent weather events have favored increased activity in the area. Any transplants moving from or through these areas of the southeast may have been exposed to blue mold and thus present some level of risk to northern areas. Dr. Paul Bertrand, Extension Plant Pathologist, University of Georgia, provided the following account of the blue mold situation in his state. Blue mold is now widely scattered and very active over an eight-county area of southwestern Georgia, including the counties of Decatur, Grady, Colquitt, Mitchell, Worth, Brooks, Echols and Berrien. An estimated center of the epidemic would be the city of Moultrie, GA. Most of the activity is of recent origin. One sample was found to be insensitive to metalaxyl in tests conducted at the University of Kentucky, Plant Pathology Department. In most of the affected area blue mold is developing equally well in Ridomil treated and untreated fields. Systemic blue mold has been reported from Reno, GA. area, where the oldest reported outbreaks are occurring.

Kentucky's tobacco industry should assume that blue mold-infected transplants are moving in the trade and that storm systems may have moved the spores over much of the state at low levels. Greatest risk are to those communities north or northeast of the confirmed outbreaks, but the disease may be much more widespread than confirmed cases would suggest. Growers are urged to keep fungicide sprays in place in ALL transplant production systems. Timing and complete coverage are critical with all the labeled fungicides. Also, operate the systems as dry as possible through correct use of heat and ventilation systems. With outdoor sites, remove the covers during wet events to allow the system to dry more rapidly. Many

believe the cover protects them against blue mold. If that were the case, then why are we finding the blue mold in covered houses and beds? Do not transplant infested/infected plants to the field.

FRUIT

WET WEATHER AND DISEASE

By John Hartman

Tree Fruits: Fruit growers can expect that fungicides applied before or between rains would have weathered faster this past month. At the first opportunity, trees should be resprayed for continued control of scab and rust diseases of the fruit and foliage. Problems with apple collar rot and peach root rot caused by *Phytophthora* fungi may increase following this rainy period. Infections by *Phytophthora* and other water mold fungi increase during saturated soil episodes.

Brambles: *Phytophthora* root rot is present in some plantings of blackberry and raspberry; a worsening of the disease can be associated with saturated soils.

Strawberries: Red stele (*Phytophthora*) infections will occur on susceptible strawberries during wet periods. The effects of red stele disease will be noticed later in the season. Botrytis will also be a problem in rainy weather (see last week's Kentucky Pest News).

HOUSEHOLD

TAKE ACTION NOW FOR A FLEA-FREE SUMMER

By Mike Potter

Anyone who has ever battled fleas knows how difficult they are to eradicate. Once a home becomes infested, control can be difficult, time-consuming and expensive. A flea-infested dog or cat can introduce hundreds of new flea eggs into the home each day. By mid- to late summer, pet owners often find themselves fighting a losing battle against established flea populations that are enormous.

A better way to manage fleas is through prevention. By acting now – before fleas are abundant – pet owners can avoid severe infestations later in the season. Preventive flea control has been made possible by new product innovations and insights into flea biology. We now know that adult fleas (the biting stage) spend virtually their entire life on

the pet, not in the carpet. Eggs are laid on the fur and fall off into carpeting, beneath furniture cushions, and wherever else the pet lays, sleeps or spends time. After hatching, the eggs transform into larvae, pupae, and eventually adults to renew the cycle.

Pet owners can break the cycle of flea development and prevent future generations by killing the eggs as they're laid on the pet, or by eliminating the egg-laying adults. *The easiest way to do this is to take action now, before flea problems get out of control.* Several products are available which are convenient and effective.

The “**Pill**” (*Program(R)*)-This product prevents flea eggs from hatching when administered orally to pets, once a month, at mealtime. Dogs are fed *Program(R)* in tablet form, whereas cats are fed a liquid suspension mixed with their food. Different tablet sizes and suspension doses are prescribed according to the weight of the animal. When an adult female flea bites a *Program(R)*-treated dog or cat, the flea ingests the active ingredient (lufenuron) which then passes into her eggs and prevents them from hatching. *Program(R)* is dispensed only through veterinarians. A companion product, *Sentinel(R)*, contains both the flea control ingredient and heartworm medication all in one dosage.

“**Egg-Stopper**” Collars- Unlike conventional flea collars, these contain an insect growth regulating ingredient (methoprene or pyriproxyfen) which prevents egg hatch for several months. Thus, the overall effect is much like the “pill.” *Pet owners should carefully read the “active ingredients” panel on the package of the collar to verify that methoprene or pyriproxyfen are present.* One such brand, the *Ovitrol/Ovitrol Plus(R)* Flea Egg Collar is available through veterinarians. Retail versions include the *Fleatrol(R)* Flea Egg Collar and *Relieve(R)* Collar, sold in pet stores and discount chains. Once installed, the egg-inhibiting substance releases from the collar and rapidly distributes over the fur of the entire animal, killing flea eggs on contact. This breaks the life cycle and infestations never become established. The methoprene/pyriproxyfen-impregnated collars are virtually 100% effective at preventing new flea eggs from hatching for at least 6 months (essentially season-long) on both dogs and cats.

Spot-Ons- A final treatment method involves applying a few droplets of material between the shoulder blades of the animal. Two veterinarian-supplied products, *Advantage(R)* and *Frontline(R)*,

control adult fleas on pets for at least 1 month. On dogs, Frontline(R) Top Spot lasts up to 3 months. Another "spot-on" product, available through retail stores, is Biospot(R) which contains the egg-inhibiting ingredient pyriproxyfen.

The best way to use any of the above-mentioned products is to begin now, before flea season "begins." By doing so, you will greatly reduce the chances of developing a serious flea problem later in the summer. Any stray fleas the pet happens to pick up around the home or at the kennel will be unable to lay viable eggs. Breaking the cycle of flea development on the pet also reduces the need to apply insecticides throughout the living areas of the home. (Each of these on-animal products is of negligible hazard to people and pets, and there is no adverse reaction with other medications.) Methoprene or pyriproxyfen-based products may need to be supplemented periodically with a topical spray or dip to knock down any adult fleas irritating the pet, especially if the animal is flea allergic. This should not be necessary with Advantage and Frontline. In any case, the occasional adult flea spotted on the pet will be unable to reproduce and will soon die off.

If you were frustrated by fleas last year, give this preventative approach a try. In Kentucky, the treatment regimen need not be maintained beyond November unless fleas continue to be a problem. Always read and follow label directions and the advice of your veterinarian.

LAWN AND TURF

RESEARCH ON "SAFE-T GREEN 18" AND "SM-9" SHOWS POOR RESULTS

By Paul Vincelli

A very ineffective product called "SAFE-T GREEN 18 Turf Fungicide" (also called "SM-9") has been marketed in the region for control of turf diseases. Last year, it was registered with the Kentucky Department of Agriculture's Division of Pesticides (EPA Reg. No. 65864-1). The active ingredient is a nonionic surfactant, namely an alkyloxypolyethyleneoxyethanol.

As of 28 Apr 98, SAFE-T GREEN 18 Turf Fungicide was not yet registered in Kentucky for this season, and so is not a legal product for turf disease control at this time, but this could change if a registration packet were submitted and accepted.

I have seen several reports and research presentations on this material. All evidence I have seen can be easily summarized in three words: **poor disease control.**

Fungicide manufacturers often present very high-quality research reports. This has not been the case with SAFE-T GREEN 18 Turf Fungicide. The company/consultant research on this "fungicide" has been of low scientific quality, so I cannot draw valid conclusions from their reports. In contrast, I have seen some excellent work on SM-9 for turf disease control by university plant pathologists, from which I can draw substantive conclusions. In those studies, this material ("SAFE-T GREEN 18" or "SM-9") provided, at best, only a very slight level of control of diseases caused by fungi, one that is clearly unacceptable in a commercial turf setting. The limited data I have seen for nematodes in turf showed no difference in numbers of plant parasitic nematodes between plots treated with SATE-T GREEN 18 and untreated plots.

With so many effective turf disease control products to choose from, I see no reason why anyone should use "SAFE-T GREEN 18" or "SM-9" in Kentucky, should they be marketed here again.

SHADE TREES AND ORNAMENTALS

EFFECT OF PROLONGED OR HEAVY SPRING RAINFALL ON WOODY PLANT DISEASE

By John Hartman

The prolonged and sometimes heavy rainfall which occurred in parts of Kentucky during the last half of April is having an impact on the plant disease situation now and could affect woody plant reaction to diseases later in this growing season. Look for the following disease problems:

a) Sycamore anthracnose is devastating on many sycamores again this year. Look for dead not-yet-expanded leaves on infected twigs and shoots throughout the tree.

b) Ash leaflets with dead spots and blotches cover the ground under trees infected with ash anthracnose. White ash is especially affected, but in street side plantings, notice that not all individuals are affected. Older ash trees, originally produced from seedlings, would differ genetically, including their reaction to anthracnose.

c) Apple scab lesions are developing on flowering crabapples. Continued rain has very likely favored secondary infections.

d) All three cedar rusts were quite prominent on junipers and cedars, and were especially active due to the almost continuous wet weather. The rust fungi will soon quit producing spores on cedar, but we should soon see the other phase of the disease in the form of symptoms and signs on hawthorns, apples, and flowering crabapples.

e) Anthracnose symptoms on oak, dogwood and maple should become more and more evident as the weeks progress.

During some periods this past month, soils were saturated with water or temporarily flooded. Roots of plants not tolerant to low soil oxygen levels will not function normally in flooded soils. This stress may weaken plants so that they become susceptible to diseases that might not normally be a problem. In some cases, root rot diseases promoted by wet soils will not appear as damage to the top growth of the plant until a dry period occurs in mid- summer.

a) Rhododendron, dogwood, taxus and other woody plants are susceptible to root rots caused by *Phytophthora*. The effects of root rot occurring now will be noticed during dry periods this summer.

b) In addition, many of the twig blight and canker diseases of woody plants occur following periods of plant stress. If soil saturation was prolonged, roots, lacking oxygen, would not function normally and plants would be stressed.

PESTICIDE NEWS AND VIEWS

CHEMICAL COMPANY TO PAY \$225,000 PENALTY FOR WPS MISLABELING by Monte Johnson

The Environmental Protection Agency said that Monsanto Company has agreed to pay a \$225,000 penalty for mislabeling some Roundup herbicide products. The EPA also said it was the largest settlement ever paid for violation of the Worker Protection Standards (WPS). Monsanto distributed mislabeled Roundup containers on at least 75 occasions, the EPA said. The label for the herbicide restricts entry into a treated area for 12 hours. Monsanto notified the EPA that it had distributed the herbicide with labels that incorrectly stated a restricted entry interval of four hours. The EPA said that exposure to this particular form of Roundup herbicide can cause eye irritation, and the herbicide is harmful if swallowed or inhaled. Monsanto spokeswoman Lisa Drake said the error happened in July 1997. "We took immediate action

and cooperated fully to ensure full compliance," she said. She also said that the error concerned only a small number of customers and did not involve Roundup Ultra, the agricultural herbicide, or Roundup Ready-to-Use. (WPS-Forum, March 28,1998)

RESPIRATORS UNDERGOING CHANGES by Monte Johnson

In July 1995, NIOSH upgraded the certification tests for particulate respirators. Current pesticide labels reference dust/mist filtering respirators (MSHA/ NIOSH approval number prefix TC-21C) and organic vapor-removing cartridge respirators with prefilters approved for pesticides (MSHA/ NIOSH approval number prefix TC-23C). These respirators are certified under NIOSH's Part 11 regulations; new particulate filters will be certified under NIOSH's Part 84 regulations.

As of July 10, 1998, respirator manufacturers will cease to make Part 11 respirators; users can continue to use Part 11 respirators until the supply is depleted. Part 84 filters are more resistive to oils in terms of maintaining electrostatic charges. They also have a better collection efficiency in the 0.3 micron range (this is the particle size that is most penetrating in terms of respirator filters). The dust/mist filtering respirator will now be called a "filtering facepiece respirator." They are designated as N(no oil), R (oil resistant), or P (oilproof) and have an efficiency designation (95, 99, or 100%). Organic vapor cartridges are now called "NIOSH approved respirator with organic vapor (OV) cartridge or cannister with any N, P, R or HE filter." The "N" type cannot be used if the material being applied contains oil. The OV cartridge color coding remains unchanged; OV cartridges have a black background with white lettering. EPA plans on issuing a Federal Register Notice on these changes in the near future. (WPS-Forum, April 22, 1998)

INSECT TRAP COUNTS

April 24 - May 1
Princeton

Black Cutworm	3
True Armyworm	100
European Corn Borer	0

Lee Townsend, Extension Entomologist

