



# KENTUCKY PEST NEWS

ENTOMOLOGY • PLANT PATHOLOGY • AGRONOMY

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## TOBACCO

### CURRENT BLUE MOLD STATUS

By William Nesmith

Blue mold remains active in Florida with some increased activity reported last week. Weather conditions have been conducive several times during the last three weeks in the southeast to favor blue mold development and spread.

Several growers and agents have called about the movement of Southern transplants into Kentucky. The inquiries usually center around an assumption that the importation southern transplants into Kentucky had been outlawed. This is my understanding of that issue. Moving transplants into Kentucky from other states is still legal, including from the southeast. It is true that an attempt was made to obtain more regulatory control of this practice. However, the proposal was not voted on by the Kentucky Legislature, apparently. It died for lack of a legislative sponsor.

Transplants have been moving legally into Kentucky from other states for several weeks, which will continue into May. Transplant movement into Kentucky from areas with blue mold does present increased risk for earlier establishment of the disease.

I urge growers to take steps to control blue mold in transplant production. All transplants under production in Kentucky should be receiving regular preventive fungicide sprays of either Dithane DF or

Ferbam to prevent blue mold and other common foliar diseases. Waiting until blue mold is present in the area is not a sound way to deal with blue mold in transplant production. Should blue mold be present or be suspected in any transplant production system, whatever the transplant source, immediately get samples to the County Extension Office. The agents should then contact the Plant Disease Diagnostic Laboratories in Lexington or Princeton for details on handling the sample. If it is blue mold, the grower will be advised immediately to destroy the transplants so that they do not continue to serve as a source of inoculum to the state and community. I might add, however, that very few growers follow that advice, but we have observed great success in slowing spread and reducing loss in the community when the initial findings were destroyed promptly. Since Kentucky producers are also shipping transplants to other states, we must also promptly report any blue mold activity in Kentucky for the benefit of all tobacco growers in the nation.

Remember, blue mold control requires community action!

### TOBACCO INSECT CONTROL OPTIONS

by Lee Townsend

What kind of preventive insect control programs are most likely to return a profit to growers? The choices include those for soil insects, such as wireworms and cutworms, flea beetles, or aphids. Some overlap relatively well and address several pests, others are very specific.

Fortunately, wireworms are not common soil insect pests of tobacco in Kentucky and cutworm problems are sporadic. If wireworms were a problem last year, or if tobacco is going into ground that has been in bluegrass sod for 10 or more years, then preventive wireworm control may pay a return.

When wireworms are a concern, the best control is expected from a liquid formulation (such as Lorsban 4E) that is sprayed onto the soil and incorporated according to label directions. The treatment should be applied about two weeks before transplanting. This approach is successful because the insecticide is mixed thoroughly in the soil. Granular applications or impregnation of liquids onto dry fertilizer does not give as thorough a distribution of the insecticide in the soil. Thus, there tends to be less contact with the target pests.

Early application gives time for the insecticide to work. This is especially important for control of hard-bodied wireworms, as well as cutworms. There will be no effect on tobacco flea beetles or aphids.

Expect only fair control of wireworms with a transplant water application. There is only a relatively small "pocket" of treated soil around the base of a plant. This is not likely to be enough to protect plants if wireworm pressure is high.

The relatively mild winter should mean good to excellent survival of overwintering adult tobacco flea beetles. The potential for damage to newly set transplants is high. Preventive control of these insects is available control through transplant water applications of either Orthene / Acephate or Admire as a tray drench or in the transplant water. These products will give 4 to 5 weeks of flea beetle control, enough to get transplants off to a good start. There may be some initial feeding holes on treated plants but damage will be minor compared to what can occur on untreated plants.

In general, field research has shown us that aphid populations on early set tobacco tend to remain relatively low during the first half of the season and build late. Aphid numbers tend to become significantly higher earlier in the season on late set tobacco. Consequently, it appears that the preventive approach is most useful then.

Admire provides systemic, preventive control of tobacco aphids for most of the season. It also provides flea beetle control for the first few weeks after transplant.

When considering preventive control of tobacco insects, determine the pest(s) that have caused chronic problems and let them guide your selection.

## SOYBEANS

### BURNDOWN WEED CONTROL IN FULL-SEASON NO-TILL SOYBEANS by James R. Martin

Full-season no-till soybeans can have numerous weeds at the time of planting including marestalk, prickly lettuce, fleabane, Italian ryegrass, Pennsylvania smartweed, common lambsquarters, and giant ragweed. These weeds can be controlled effectively with a burndown herbicide applied either as an early-preplant (EPP) treatment approximately 2 weeks ahead of planting or as a preemergence (PRE) treatment during or soon after planting but prior to soybean emergence.

Gramoxone Extra, Roundup Ultra, and Touchdown 5 are the traditional burndown herbicides that control several annual broadleaf weeds and grasses in no-till soybeans. Listed in the following table are recommended rates of these products based on type and size of weeds.

BURNDOWN HERBICIDE	WEED SIZE
Gramoxone Extra Annuals 1-3 " tall Annuals 3-6 " tall Annuals 6 " tall	1.5 to 2 pt/A 2 to 2.5 pt/A 2.5 to 3 pt/A
Roundup Ultra Annuals < 6" tall Annual weeds > 6" tall Certain perennials	1.5 to 2 pt/A 2 to 3 pt/A 4 to 8 pt/A
Touchdown 5 Annuals < 6" tall Annual weeds > 6" tall Certain perennials	1.2 to 4.8 pt/A 1.6 to 4.8 pt/A 1.6 to 6.4 pt/A

In addition to Roundup Ultra, several glyphosate-containing herbicides have recently been developed and include such products Roundup Original, Roundup Custom, Glyphos, and Glyphomax Plus. Backdraft (glyphosate + imazaquin) and Extreme (glyphosate + imazethapyr) are examples of glyphosate premixes available for burndown weed control in no-till soybeans.

Canopy, Canopy SP, and Canopy XL can be used for controlling annual broadleaf weeds up to 3 inches tall and certain annual grasses up to 2 inches tall. Depending on the rate applied, these products can provide residual and postemergence weed control.

Products containing 2,4-D may be applied as an early preplant treatment 7 to 30 days before soybean planting for controlling such broadleaf weeds as prickly lettuce, marestalk and mustards. The minimum preplant interval varies depending on formulation and amount of 2,4-D applied. When applying 2,4-D ester formulations, delay planting soybeans at least 7 days for rates up to 0.5 lb ai/A

and 30 days for rates > 0.5 to 1 lb ai/A. Soybean seed should be planted at least 1.5 to 2 inches deep.

Other herbicides recently registered for use as early preplant applications in no-till soybeans include Clarity and Harmony Extra. The Clarity label requires a minimum accumulation of 1 inch of rainfall and a 14-day early preplant interval for 8 oz/A or less and a 28 day interval for 16 oz/A. Harmony Extra must be applied at least 45 days prior to soybean planting. Our experience on the use of these products as early preplant treatments in soybeans is very limited and needs further research.

Consult the product label when using these or other herbicides for burndown weed control in no-till soybeans.

## **FRUIT CROPS**

### **RECENT WEATHER INFLUENCES APPLE AND CRABAPPLE DISEASES**

**by John Hartman**

Apple growers in Kentucky recognize that diseases have an effect on fruit yield and quality and that the weather has a great influence on apple diseases. In spring, when the apple trees are in flower (now, in most of Kentucky) it is of utmost importance to prevent primary infections of scab and fire blight, and to prevent cedar rust infections.

The weather in April has been quite unsettled, with variable temperatures and some periods of leaf wetness. Growers who are monitoring the weather and using computer programs for determining risks of scab and fire blight should be able to use their data to optimally manage these two diseases. Did the weather provide conditions for infections? If so, when should we expect to see symptoms? The following information pertains primarily to the Lexington area, thus others in the state must extrapolate from this report.

In brief, temperatures averaged near 60 with prolonged rainfall statewide Sunday April 2 and Monday April 3. Temperatures then cooled to near freezing April 4 and 5, and warmed to the 60's April 6 and 7. Gusty winds, which can exacerbate fire blight, then occurred followed by heavy, but not prolonged rain and cool temperatures this weekend. April 9, growers were greeted with a heavy frost. What was the impact of the weather for the past 10 days on apple diseases?

Fire blight - Infections were not likely. According to the Maryblyt program we use, although a high risk of infection was reached April 2, temperatures leading up to the rainy period were too low to generate much of a population of bacteria. Thus, when it rained, there were not enough bacteria washed into the nectaries at the base of the flowers to cause primary infections. A high risk, but no

infection was also indicated at Quicksand, according to Terry Jones. Other parts of the state, however, perhaps had warmer temperatures and would report different results. A second possibility of fire blight infection occurred when it rained on April 8, but the temperatures were too low for infection to occur. Gusty winds on April 7 and 8, which can create wounds for the fire blight bacteria to enter could have promoted infections, but again temperatures were not warm enough for a long enough time to generate many bacteria for infection. Thus, it appears that so far, apples and crabapples have not endured primary fire blight infections - but they are still vulnerable as long as there are booms on the trees or tissues are injured by hail or gusty winds.

Scab - Infections most likely occurred on April 2, 3, and 4. In Lexington and statewide, temperatures were appropriate and leaf wetness was so prolonged that severe infections should have occurred. The main question mark is whether or not, because of last year's drought, there was much inoculum of the scab fungus available. One should expect that the scab fungus managed to infect some susceptible crabapples last year and that at least some spores are available for this season. We will soon know. Depending on temperatures the rest of this week, look for scab symptoms to first appear about the middle of April. Once even a few symptoms appear, there will then be plenty of spores for new infections during subsequent wet periods. Although it is too late to prevent the primary infections, apples and crabapples can still be protected from secondary infections. The rain on April 8, although heavy, probably did not keep the leaves wet long enough for more infections.

Cedar-apple rust - Infections were likely during the prolonged wetting early this month. Cedar rusts require even less leaf wetness time for infections than scab. Cedar-apple and cedar-quince rust spore formation has been observed on cedars here during wetness periods. Look for apple rust symptoms in several weeks.

For disease management advice, commercial apple growers may refer to ID-92, the Kentucky Commercial Spray Guide for 2000, and backyard apple growers may refer to ID-21, Disease and Insect Control Programs for Homegrown Fruit in Kentucky.

### **TIME TO SET TRAPS**

**by Ric Bessin**

With bloom finishing in some parts of the state, growers should have their pheromone traps in place for San Jose scale and codling moth. Ideally, we would like to have these traps in place by the pink stage, but there still is a little time to hang them. I like to have the codling moth trap set on the second row from the outside of the orchard, at least half way up in the tree, and on the southwest corner.

The San Jose scale trap should be placed on a tree that is known to have an active scale infestation (scale on the fruit last season or active scale noted while pruning). Both of these traps will help to determine the need for and the timing of insecticide applications.

For codling moth, the day the fifth moth is captured in the trap is the start of degree day counting. Minimum and maximum temperature are then used to calculate daily degree day values. Essentially, the average daily temperature minus 50°F is the daily degree day value. If the number is less than zero, then just use zero. When 250 of the degree day units have been recorded, then an insecticide is used for codling moth control. If more than ten moths were captured within a week, a second spray is used in the next cover spray.

With San Jose scale, the same method is used once the minute male scale are captured in the trap. Degree days for this pest are calculated using a base temperature of 51°F and a spray is applied at 405 degree days. Currently, Lorsban is the most effective scale material available for use on apples.

## VEGETABLES

### COLE CROPS' PESTS

by Ric Bessin

While it is still cool, cabbage producers should watch for flea beetles, imported cabbageworm and the diamondback moth larvae to begin attacking within the next few weeks. While there are other insects that attack cabbage, these are the first to arrive in the spring. To inspect a cabbage field, a minimum of 10 groups of five plants are examined in each field. These groups should be randomly selected in order to represent the entire field.

As with sweet corn, flea beetle numbers attacking cabbage (even though it is a different flea beetle) are likely to be high due to the mild winter. Flea beetles

need to be controlled when an average of two or more are observed per plant. With imported cabbageworm and diamondback moth larvae, plants are examined for the presence and absence of 'worms'. If 15% of the plants are found to have live larvae, then an insecticide is used for control. Always check the undersides of the leaves and the bud area, as this is where the pests are found.

### SWEET CORN SEEDLING INSECTS

by Ric Bessin

Sweet corn producers need to watch their seedlings carefully for cutworm and flea beetle activity. This is likely to be a severe year for corn flea beetle. This insect vectors Stewart's Wilt. Most of the sweet corn

is more susceptible to this bacterial disease, so growers need to be prepared to treat their field as it emerges and flea beetles begin feeding. Treat for cutworms when 3% cutting is observed and 2 or more live larvae are seen per 100 plants. To find the cutworms, dig in the soil around the base of damaged seedlings.

## DIAGNOSTIC LAB HIGHLIGHTS

by Julie Beale and Paul Bachi

Samples seen in the diagnostic labs this past week have been mostly ornamentals, although tobacco float plants are beginning to appear as well as a few wheat samples (with environmental problems). Tobacco diagnoses have included high soluble salts, high alkalinity, and low fertility. Diagnoses on ornamentals have included juniper with cedar-apple rust (telial horns expanding on galls); junipers with phomopsis twig blight; mugo pine with tip blight and severe pine needle scale infestation; rhododendron with Pestalotia invading sun/wind damaged leaves; rose with rose mosaic virus; crabapple with powdery mildew; Ranunculus with downy mildew; fuchsia with growth regulator damage; samples of tuberous begonia with spider mites and Botrytis blight.

## INSECT TRAP COUNTS

UKREC, Princeton, KY - March 31 - April 7

Black cutworm ..... 11

NOTE: Trade names are used to simplify the information presented in this newsletter. No endorsement by the Cooperative Extension Service is intended, nor is criticism implied of similar products that are not named.