Pre-plant soil fumigation is widely used in flue cured tobacco production, mainly for nematode control in sandy-textured soils and to assistance in controlling other soilborne diseases. In contrast, fumigation has not been widely used in burley or dark tobacco production. There are a number of reasons for this, but the leading factors relate to few nematode problems in our heavier and cooler soils, and that other root diseases are controllable using crop rotation and resistant varieties (especially those with very high resistance to black root rot). Furthermore, effective soil fumigation is much more difficult to achieve in our heavier and colder soils.

Preplant soil fumigation with a multipurpose fumigant can be used successfully in burley and dark production, and it can significantly improve situations with declining yields caused by tobacco stunt, nematodes, black root rot, black shank, and other root pathogens. But soil fumigation requires careful planning and attention to label details during applications. In Kentucky, the greatest impacts with fumigation have been observed in crops planted in continuous tobacco to varieties with little or no resistance to black root rot or where nematodes are at problem levels. Soil fumigation has also significantly improve control of black shank and tobacco stunt in some trials when the fumigant contained more than 30% chloropicrin. Unfortunately, test results have been highly variable in Kentucky - driven mainly by weather events, soil preparation, and the diseases and varieties involved.

Fumigant effectiveness is directly related to the ability of the fumigant-chemical to become trapped in the soil, to then vaporize and move freely in the soil pores where it contacts and kills, and to then escape before transplanting. Achieving this requires applying the fumigants (either broadcast or within row-bed/ridges) into properly prepared sites (soil prepared nearly ready to set) at least 21 days prior to transplanting (or longer if an extended wet period occurs after fumigation) and those soils must have good soil tilth, proper soil moisture, and proper soil temperatures. Our best results have been associated with applications made into high-wide beds, as used in flue cured production, which our local growers often call “sweet potato ridges”. Most burley and dark
tobacco growers have rejected the concept of “sweet potato ridges” as being incompatible with their operation, but a few have adopted the ridges, with or without fumigation. Thus, we have devoted more of our efforts to broadcast fumigation. Regardless, fumigants should be injected at a depth of 6 to 8 inches and sealed in by immediately forming a bed or by compaction of the injection slit. Moreover, at the time of fumigation, the soils should be prepared ready to set, moist but not wet, and at least 55 F - achieving this at least 21 days prior to normal setting time is difficult with early set.

The following fumigants have been effective in some tests in significantly reducing root diseases of burley and/or dark tobacco caused by black root rot, black shank, nematodes, and tobacco stunt. Please follow the label directions carefully concerning application and safety issues.

* Chloropicrin-containing products: Chlor-O-Pic and Chloropicrin 100 at 3 gallons/ A for in-row-injection, or 5 to 6 gallons/ A broadcast injections.

* Methyl Bromide + Chloropicrin-containing products: Terr-O-Gas 67 or Tri-Con 67/33 at 6 gallons/ A for in-row injection.

**SOIL APPLICATIONS OF MEFENOXAM-CONTAINING FUNGICIDES FOR DISEASE CONTROL IN BURLEY AND DARK TOBACCO FIELDS - 2002 SEASON**

by William C. Nesmith

Only one fungicide active ingredient is labeled (as of April 15, 2002) for soil application in burley and dark tobacco - mefenoxam, which is found in Ridomil Gold EC and Ultra Flourish. Mefenoxam-containing fungicides can be an important tool for controlling black shank, bluemold, and Pythium in the field. However, chemicals should not be considered the primary tool in root disease control, rather they are important supplements to other disease control methods - especially crop rotation and resistant varieties. Using the proper rate, the appropriate application/ placement method, and the correct timing are important to achieving successful control with this chemistry. It performs best when used prior to infection (in a preventive role) rather than waiting until the disease is damaging the crop, but this chemistry also has some rescue potential.

Ridomil Gold EC and Ultra Flourish contain the same active ingredient (mefenoxam) but the rate of active ingredient (a.i.) is different. Ridomil Gold EC contains 4 lbs a.i./ gallon while Ultra Flourish has 2 lbs a.i./ gallon. They have been equally effective in our side-by-side tests when used at the same rate of active ingredient and timing. Mefenoxam-containing fungicides are highly effective in the control of black shank, Pythium root rot, and bluemold as long as the strains involved are sensitive to the chemical and sequential applications are used. Insensitive strains have been found for all three of these tobacco pathogens in Kentucky, with most blue mold strains operating during the past decade being insensitive.

These fungicides are labeled ONLY for soil-directed application - preplant only, or preplant plus layby, or preplant plus 1st cultivation, and layby. **Current labels do not support use of the cultivation or layby treatments unless the preplant application has also been made. Both labels prohibit all uses in transplant production, transplant water, and foliar applications.**

The pre-plant applications should be made in at least 20 gallons of water per acre and incorporated 2-4 inches. Our data have long supported the benefits of including a series of pre- and post-plant applications, especially under moderate to strong black shank pressure. Drop nozzles are needed for best results from post plant applications. Position these nozzles so the spray is deposited mainly on the soil and under the plants, insuring the soil at the base of the plant stem is included, then covered by cultivated soil. Remember that the active ingredient has strong, upward systemic activity in the plant, so it is moving away from where it is needed for root disease control. Thus, foliar deposits play little or no role in black shank and Pythium control, furthermore, chemical deposited on leaves may be phytotoxic at these rates.

Our studies have shown that “float-plants” are more susceptible to black shank than are plants produced in traditional plant beds. There are probably multiple reasons for this, but in part, it is probably due to the “transplant medium” remaining with the plant all season and providing a highly conducive environment for Phytophthora and Pythium to persist and develop near the critical tissues at the base of the stem. Consequently, sequential applications of mefenoxam fungicides (preplant, cultivation, and layby) and more careful direction of the cultivation and layby treatments have become increasingly important with use of the float plant.

The following table should be of assistance in helping growers plan their scheduling of sequential applications of Ridomil Gold EC and Ultra Flourish for black shank control.
Timing and rate of formulated product/acre **

<table>
<thead>
<tr>
<th>Disease</th>
<th>Fungicide</th>
<th>Preplant</th>
<th>1st Cultivation</th>
<th>Lay-by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Shank*</td>
<td>Ridomil Gold EC</td>
<td>2-3 pts</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Ultra Flourish</td>
<td>2-3 Qts</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Ridomil Gold EC</td>
<td>2 pts</td>
<td>0</td>
<td>1 pt</td>
</tr>
<tr>
<td></td>
<td>Ultra Flourish</td>
<td>2 Qts</td>
<td>0</td>
<td>1 Qt</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>Ridomil Gold EC</td>
<td>1 pt</td>
<td>1 pt</td>
<td>1 pt</td>
</tr>
<tr>
<td></td>
<td>Ultra Flourish</td>
<td>1 Qt</td>
<td>1 pt</td>
<td>1 Qt</td>
</tr>
</tbody>
</table>

* If only Pythium and blue mold control is desired the rates can be cut in half. These materials are effective only against mefenoxam-sensitive strains.

** Multiple applications are especially beneficial with float plants and under strong disease pressure, especially in seasons with multiple or prolonged weather stresses. The rates listed are the maximum for the product.

"BUGS" IN THE FLOAT SYSTEM

by Lee Townsend

Regular inspections, preferably twice a week, will help to catch important pest problems early and keep seedling losses to a minimum. Early problems have included pillbugs and small ground beetles but cutworms and shore fly problems will not be far behind.

Pillbugs and sowbugs, the small gray creatures that roll into a ball when disturbed, need humid air to survive. Conditions around float beds are ideal for them and they can crawl in trays and burrow in the growing media. They are scavengers but may feed on small plant roots and uproot seedlings. Control with insecticides can be erratic. Sevin bait, scattered around the perimeter of the float area, or greenhouse, should be more attractive and may help to reduce their numbers. If the bait is not available, the Orthene Tobacco Spray should be used. Keeping a clipped, clear border around the area will discourage movement of pillbugs into the float area. They do not like to move in exposed, dry areas.

Small ground beetles can be a problem in float plants. These ½" long dark beetles are causing most of their damage by digging into the media. They may be attracted to the area by outdoor lights and dig into the soft media to hide during the day. As with pillbugs, the hard body covering reduces the effect of an insecticide application, even with direct application to the insect. Elimination of outdoor lighting and exclusion screens should help to keep them out.

Variegated cutworms are dark brown to black caterpillars that lighten to a dingy gray as they grow.

The distinctive feature is a single row of small light spots (1 per body segment) down the center of the back. Variegated cutworms feed on seedling leaves and burrow down into the media when not feeding. They are among the largest of our cutworms, reaching a length of just over 1-1/2 inches when full-grown. Most of the feeding is done in the last stages of the 3-1/2 week larval period so a lot of damage can occur over a short period of time.

Watch for rounded holes in the leaves and search around damaged plants for the cutworms. Moths lay clusters of about 60 eggs on low-growing plants. This means that there will be "hot spots" on particular trays or groups of trays, rather than a general widespread infestation over the entire area. A single moth can enter the greenhouse or float area and lay several clusters of eggs. Some outdoor lighting systems may attract moths to the area and subsequently lead to infestation. Usually the moths are active at night and rest in hidden areas during the day.

Shore flies should be showing up now. Shore fly larvae are small, dingy gray, headless creatures with a short, forked tail. They feed on algae growing on the media surface but also can scrape holes in plant leaves. Damage is usually limited to leaves in contact with the media, however, the larvae can tunnel into plant stems. The adults are small, clear-winged gnats that can be seen crawling over the plants and media.

Variegated cutworms and exposed shore fly larvae and adults can be controlled by foliar sprays of Orthene. Larvae inside stems are not affected by the treatment.

Waterfleas are among the more unusual things that can be found in float water. A bout the size, shape, and color...
of an alfalfa seed, these small creatures zip along in the water and can be abundant enough to make it seem alive with them. They pose no threat to tobacco plants. Water fleas feed on small particles in the water and do not damage tobacco root systems.

**CORN**

**CUTWORMS IN CORN**
by Ric Bessin

Last week, Patty Lucas began to capture black cutworm moths in pheromone traps at the UK Research and Education Center in Princeton. So corn producers should watch your fields very carefully over the next few weeks. Considerable damage can be done over a short period of time, particularly during the cool weather as corn is growing more slowly and cutworms continue to feed on small seedlings. Preventive controls may be all the control that is needed in some situations, but with excessive cutworm infestations, preventive controls may not be sufficient. Significant damage can still occur in treated fields if cutworm populations are excessive. Fields should be scouted, even if they have had a preventive treatment.

The best strategy, will be to scout fields and use rescue treatments as necessary. This has always been the most cost-effective when scouting is done regularly (2 to 3 times per week). The worst strategy will be to do nothing and leave cutworm losses to chance.

**SOYBEANS**

**SOYBEAN DISEASES CONTROL: ARE WE MISSING OPPORTUNITIES; PART V**

**Pod and stem diseases caused by fungi**
by Don Hershman

Fungal pod and stem diseases are a perennial problem in Kentucky. The two most common ones, pod and stem blight and anthracnose, and a more sporadic disease, stem canker, are the focus of this next-to-last installment of this series. Again, the focus of this series is to consider the soybean disease situation in Kentucky and see if there are areas where general improvements can be made in disease management.

Of the above three diseases, the one that has the greatest impact year in and year out is pod and stem blight. This disease, caused by the fungus Diaporthe phaseolorum var sojae (DPS) (called Phomopsis phaseoli when the fungus is in the asexual stage) infects plants during early crop development, but the infections remain symptomless until late in the season. At that time symptoms may become evident on all above-ground plant parts, but especially on pods and stems. The greatest impact of the disease is on seed within maturing pods (called Phomopsis seed decay). Infected seed may be severely shriveled and cracked, and are frequently covered with a white mat, which is a sign of the causal fungus. The disease does not appear to be a major player in reducing crop yields, even when it is very widespread in a field. However, seed quality can be greatly reduced. This is especially true for early maturing varieties planted early, and for all maturity groups harvested late. Both seed germination and vigor can be greatly reduced and, thus, Phomopsis seed decay is a significant concern to seed producers.

Planting seed damaged by Phomopsis seed decay can result in serious stand problems. The best way to manage this disease from the seed production end is to avoid planting early-maturing varieties early and by harvesting all seed fields in a timely fashion. Resistance to pod and stem blight does exist, but that trait is poorly characterized in commercial varieties. In other words, it would be very difficult for a producer to seek out and find an agronomically acceptable soybean variety that is known to be resistant to DPS. Seed quality can also be protected by applying one of several labeled foliar fungicides during the latter stages of pod fill. However, due to the cost of product purchase and application and the low crop value, very few seed producers consider applying a foliar fungicide, except in rare instances. Fungicides are not recommended in Kentucky for yield aspects related to pod and stem blight. Some disease management benefit may be derived by practicing crop rotation and tillage.

When planting seed of questionable origin (e.g., saved seed), it is always best to have that seed tested to be certain it has an acceptable level of germination and vigor. One advantage of planting saved seed is that seeding rates can be increased to compensate for reductions in germination. However, this is a risky approach to planting if seed germination is unknown. I have seen situations where stands are severely damaged due to poor germination, even where seeding rates are significantly increased. Germination of seed moderately impacted by Phomopsis seed decay can be improved by applying various seed treatment fungicides. However, seriously damaged seed will not be helped, nor will dead or mechanically damaged seed. The best way to assure that the seed planted is of a high germination is to purchase and plant certified seed.

Like pod and stem blight, anthracnose is an extremely common disease in Kentucky soybean. I have never seen an anthracnose epidemic in Kentucky, thus, I do not think it is a great threat to soybean yield. However, I do believe that anthracnose consistently reduces yield, perhaps in the low single digit percentages, almost every year. I would classify it as a “nickel-dime” disease.
It is a more serious disease concern in the deep south. Perhaps the most serious consequence of anthracnose in Kentucky is as a complex with Phomopsis seed decay in reducing soybean seed quality. Control options and recommendations for the two diseases are the same. I am not aware of any commercially-available varieties that resist anthracnose. Rarely, seed producers will apply foliar fungicides to protect seed quality in early planted, early maturing varieties; this treatment will limit both anthracnose and Phomopsis seed quality problems when disease favorable conditions exist. Overall, I do not see many options for Kentucky soybean producers to significantly improve anthracnose management programs.

The last disease I want to discuss in this article is Stem Canker -- more precisely, southern stem canker (SSC) caused by the fungus Diaporthe phaseolorum var. meridionalis. This disease is highly sporadic in occurrence, but I have seen it completely destroy a few fields over the past 18 years. Usually, however, stem canker occurs as randomly scattered diseased plants within an otherwise healthy field. Stem canker is frequently confused with sudden death syndrome (SDS), but the symptoms of the two diseases are quite distinct. There is some overlap in early foliar symptoms, but beyond this there are no real similarities.

With SDS, the roots of affected plants are severely rotted, diseased leaflets curl up and eventually drop off the petioles, and the internal stem tissue will be slightly discolored; the exterior of stems remain unaffected. With SSC, plant roots are healthy, leaves dry up and remain attached to the plant, and stems are extensively cankered (at least in advanced stages) with cankers being visible on the exteriors of diseased stems. The pattern of affected plants can be similar, except that SDS symptoms are often associated with areas of the field that encourage root infection. SSC is an airborne disease, so the occurrence is more random.

Overall, the random and sporadic nature of SCC in Kentucky, and its frequent misidentification as SDS, has resulted in the disease not making it onto most farm “radar screens”. Consequently, very few producers do anything specific to manage SCC. Paying more attention to the SSC potential might be a way to improve crop performance on some farms. The best way to manage SSC is by planting a resistant soybean variety. These are plentiful in MG V soybean and available, but not abundant and MG IV soybean. Some MG III soybeans resist SSC, but there has not been a great deal of work to identify or develop SSC resistance in that maturity group. Another effective way to manage SSC is to delay planting until the end of May. Because SSC is an airborne disease, there may be some value by not planting soybean in back-to-back years in a field, especially where no-tillage is practiced. However, because spores of the SSC fungus are airborne, disease can still develop in a susceptible variety even if a field was well-rotated and tilled before planting soybean. Some soybean producers in more southern states have successfully used foliar fungicides to manage SSC. A problem with this tactic is that the SSC fungus infects during the early vegetative stages, but symptoms do not manifest until the reproductive stages. Thus, a fungicide application would have to be applied very early in crop development. This option is unacceptable to most producers considering the sporadic nature of SSC and the relatively high cost of the treatment compared with crop value.

In the last installment (Part VI) of this series, I will discuss soybean viruses diseases.

**WHEAT**

**ARMYWORM MOTH FLIGHT BEGINS**

by Lee Townsend

Patty Lucas, IPM Specialist, reported the start of armyworm moth flight beginning last week at the UK Research and Education Center in Princeton. It is too early to tell whether or not there will be a repeat of the outbreak that occurred last year. However, the first week catch this year was 37 moths compared to 213 during the comparable time last year. Trap catches over the next few weeks will give us an idea of what to expect this spring.

**FORAGES**

**INCREASED RISK OF LEPTO LEAF SPOT IN FREEZE-DAMAGED ALFALFA**

by Paul Vincelli

Garry Lacefield (UK Agronomist at the UK Research and Education Center in Princeton) reports that some alfalfa fields, particularly in southern and western Kentucky are recovering from freeze damage from the temperatures of 16-19°F on March 22. Affected fields have a lot of dead shoot tissue and from a distance they appear brown. Upon close inspection, one should find healthy new shoots emerging from the crowns. This will likely delay the first cutting by several weeks.

The fungus that causes Lepto leaf spot is an aggressive colonist of freeze-damaged tissues. Consequently, spore levels of this fungus can get pretty high as the first cutting grows in. If these fields experience extended cool, wet weather during growth of the first cutting, there could be a lot of damage from this disease.
Symptoms
Leaves exhibit spots that are initially small (1/16" or less) and brown. As the spots expand, they have a tan center with a brown margin. Sometimes leaflets turn yellow and fall off. All leaflets on a stem may be diseased in severe cases, but younger leaves are more susceptible and thus sometimes show more severe damage. Outbreaks usually develop over an entire field, and are not confined to certain portions of the field.

Early Cutting For Disease Management
If the disease develops, early cutting is the only control option available, so cut as soon as the crop is physiologically ready (as early as the appearance of flower buds). This captures as much of the high-quality foliage as possible, before the disease damages more of the forage.

Even if flower buds haven't appeared, a severe outbreak of shoot blighting from the disease can justify an early cutting. Cutting fields too young to produce flower buds would put a significant physiological stress on those plants. However, when the disease is severe (for example, all leaves on all stems showing moderate to heavy leaf spotting [10 spots or more per leaflet]), the plants are likely to lose "apical dominance" and break new crown buds anyway. Early cutting and removal of as much of the harvested forage as possible, before the disease damages more of the forage.

FRUIT CROPS
CURRENT WEATHER IS FAVORABLE FOR FRUIT DISEASES
by John Hartman

Apples: Wet weather this past weekend facilitated primary scab infections in most regions of the state. Showers predicted in midweek this week will be again render apples vulnerable to more primary infections. Most growers should have initiated scab management programs last week or the week before and must not wait until the disease is discovered in the orchard. If scab appears on apple leaves by petal-fall, growers will have likely lost the battle for this year.

Primary infections of fire blight occur now, during bloom. Many apple growers get assistance with fire blight management by using the Maryblyt computer program.

Using the computer program we can gain insight as to whether or not fire blight infections occur and where. Now, while temperatures are warm and trees are in bloom apple trees are at high risk for fire blight infection. Infections likely occurred in most regions of the state this past weekend and were triggered by rainy periods; a small amount of rain this week will initiate more infection.

Cedar rust spore bearing structures are emerged. Cedar rust infections can occur with fewer wetness hours than scab infections. Be sure that the scab control fungicides also contain ingredients that control cedar rusts.

Stone Fruits: One of the times peaches and other stone fruits are most vulnerable to brown rot disease is during bloom. The brown rot fungus requires rain or heavy dew for its spores to germinate and cause infection, and it thrives under relatively warm conditions (77 F is optimum). Current weather would have favored brown rot on late-blooming peaches. With high inoculum, optimum temperature, and high fruit susceptibility, infection can occur after only a few hours of wetness. To manage brown rot, growers should have their fungicide program already in place.

Strawberries: If fungicides for strawberry fruit rot are to be used, apply them during bloom. Research clearly shows that growers who apply just two bloom sprays now get as good control of gray mold as a full-season fungicide program. Sprays applied after bloom have relatively little effect, since infections often occur through the flowers. Be sure that strawberry straw mulch is in place between the plants and between the rows.

Grapes: grape buds have burst in most regions and new growth is rapidly expanding. Grape fungicide sprays for disease control should have begun by now, when 1/2 inch new shoot growth appears.

Plan to control fruit diseases early to prevent the primary infections that can lead to subsequent infections and disaster. Be sure to do all the sanitary chores and cultural practices to reduce inoculum and make any sprays applied more effective. For more specific information concerning diseases and control recommendations, please consult the current UK College of Agriculture commercial tree fruit spray guide (id-92) and the commercial small fruit and grape spray guide (ID-94), available at all Kentucky county extension offices.

TIME TO SET TRAPS IN APPLES
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 know 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.

LAWN & TURF

NEW USES FOR ENDORSE® FUNGICIDE UNDER 2EE RECOMMENDATIONS
By Paul Vincelli

The turf fungicide Endorse 2.5WP®, containing the active ingredient polyoxin D zinc salts, was recently labeled for control of two important diseases: brown patch which attacks a number of cool-season grasses in Kentucky, and large patch of zoysia. Based on the research I have seen, Endorse 2.5WP® provides excellent control of brown patch but poor control of large patch. See the Feb 11, 2002 issue of Kentucky Pest News for a more thorough discussion (www.uky.edu/Agriculture/kpn/kpn_02/pi020211.htm).

Cleary’s Chemical Corporation, the manufacturer of Endorse 2.5WP®, recently issue a 2ee recommendation for the use of the product to control the following diseases: yellow patch, gray leaf spot, leaf spot/melting out, pink snow mold, gray snow mold, red thread, Rhizoctonia damping off, and zoysia patch. A 2ee recommendation is a recommendation for use of a product for a disease/pest not specifically listed on the federal label. Use of the product for a pest following a 2ee recommendation must still be consistent with the label restrictions. As far as the above diseases are concerned, yellow patch, leaf spot/melting out, pink snow mold, and red thread are significant on certain turfgrasses in Kentucky. We have Kentucky data on the performance of Endorse 2.5WP® only against gray leaf spot, but against that disease, it performed very poorly in 2001. For all these diseases, alternative, thoroughly tested products are available and described in the Cooperative Extension Service publication PPA-1, Chemical Control of Turfgrass Diseases, 2002, available from county Extension Offices or online at www.ca.uky.edu/agc/pubs/ppa/ppa1/ppa1.pdf.

PESTICIDE NEWS & VIEWS

ACRAMITE 50WS: NEW MITICIDE FOR SOME FRUIT CROPS
by Ric Bessin

In February, the EPA approved the label for a new miticide, Acramite 50WS, for several fruit crops including apples, nectarines, peaches, plums, grapes, pears, and strawberries. This general use pesticide contains the active ingredient bifenazate and is produced and marketed by Uniroyal Chemical. The target mites are the two-spotted spider mite and European red mite. According to the label, this miticide will not adversely affect beneficial/predaceous mites and insects and fits well with IPM programs.

The signal word on the label for Acarmite 50 WS is “CAUTION.” The Restricted Entry Interval ranges from 12 hours on most fruit crops to 5 days for certain activities in grapes. The minimum Pre-Harvest Interval is 1 day for strawberries, 3 days for peaches, plums, and nectarines, 7 days for apples and pears, and 14 days for grapes. Only one application is permitted per season.

SCAM ARTISTS ARE BACK SELLING INEFFECTIVE CHEMICALS

Frankfort, KY-Like mosquitoes and dandelions, vendors selling bogus home and garden chemicals have reappeared with the coming of spring in Kentucky, the state Department of Agriculture has reported.

The Department's Division of Pesticide Regulation is receiving an increasing number of complaints from consumers that people are selling them ineffective chemicals over the phone, Agriculture Commissioner Billy Ray Smith said.
"These vendors make deceptive claims about their products and offer them for more than they are worth," Commissioner Smith said. "Consumers need to understand that, if something looks too good to be true, it usually is."

"The people selling these products often claim that they will kill whatever pest you may have, no matter what it is," explained John McCauley, director of the Division of Pesticide Regulation. "They also will say their product will kill the pest without affecting whatever you may want to save. Either of these claims should be red flags for consumers that they may not be getting what they're paying for."

The KDA's Ken Franks said consumers should ask questions and take good notes when being solicited to buy home and garden chemicals. Consumers should try to find out:

* The products' EPA registration number.
* The product's active ingredients and the percentages of each.
* The number of square feet or acres the product will cover.
* Complete directions for use of the product.
* The company's name, address, and telephone number.
* The seller's Kentucky license number.

To register a complaint or check to see whether a product is registered for use in Kentucky, contact Ken Franks by telephone at (502) 564-7274 or by e-mail at ken.franks@kyagr.com.

**DIAGNOSTIC LAB HIGHLIGHTS**

by Julie Beale and Paul Bachi

In the Diagnostic Laboratory this week we have diagnosed wheat spindle streak mosaic virus on wheat; Sclerotinia crown rot on alfalfa and red clover; Rhizoctonia damping-off, bleach injury and cold injury on tobacco transplants; melting out (Drechslera), powdery mildew and frost injury on bluegrass; Entomosporium leaf spot on photinia; lacebug injury and iron deficiency on azalea; Rhizosphaera needle cast on spruce; and juglone toxicity ("walnut wilt") on pine.

**INSECT TRAP COUNTS**

**UKREC, Princeton, KY - April 5-12**

Black Cutworm .......................... 4
True armyworm .......................... 37

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.