TOBACCO

BLUE MOLD STATUS
by Kenny Seebold

As of May 19, 2006, blue mold has not been reported in the U.S. Active blue mold is present, however, in western Cuba and western Mexico. The projected threat to production areas in the U.S. is low at this time. Visit the Kentucky Tobacco Disease Information Page for updates (http://www.uky.edu/Ag/kpn/kyblue/kyblue.htm).

SOYBEANS

INTRODUCTION TO SOYBEAN APHID INFORMATION FOR KENTUCKY IN 2006
by Doug Johnson

Listed in this same issue of Kentucky Pest News (KPN) you will find a series of articles concerning soybean aphid in Kentucky. Included in this series are:

- My best guess on what the 2006 season will bring,
- How well the soybean aphid has over-wintered in 2005-2006,
- An up-date on insecticides available for use against this pest,
- Information on using what was the Soybean Rust national web pages to find information on both Soybean Rust and Soybean Aphid in 2006.

You might also find two additional articles of use. In the previous issue of KPN #1092, 12 May 06, is an article about our new Aphid Suction Trap. Also, in KPN #1045, Jan 2005 is an article on how spraying for Soybean Rust might affect Soybean Aphid populations.

WHAT WILL THE SOYBEAN APHID BRING TO KENTUCKY IN 2006?
by Doug Johnson

This will be our seventh production season after the soybean aphid was discovered in the US. Since then we have found the aphid in Kentucky every year. However, in none of those years has the insect posted a major problem for our soybeans. In fact, most observers do not even see the aphid, and many others see only a few. So what do we expect in 2006?

In general, I do not expect much difference in 2006. To the best of my knowledge those items that are likely keeping soybean aphid in check in Kentucky are still in place. They are:

- The aphid must migrate in from northern states because there is no or very little over-wintering host in KY.
- KY summer temperatures are often too warm for good soybean aphid survival.
- Kentucky has an abundance of predator and parasitoid insects and fungal diseases that kill soybean aphids.
- 2005-2006 over-wintering success is not expected to produce a major soybean aphid population. (See the article, “Soybean Aphid Over-wintering for 2005-2006: A preview” in this same issue of KPN.).
- Full season beans are unlikely to be at risk. Unless something very different happens in 2006, only double-
crop, late planted or beans greatly delayed in development will be at risk.

- Required treatment for Soybean RUST might change things. (See: “Implications of soybean rust control measures on insect populations” KPN #1045, Jan 2005)
  
  http://www.uky.edu/Ag/kpn/kpn_05/pn050124.htm#soyimp

Even with these factors working for us, it is important that we keep our eyes wide open. Aphids are one of those animals that can adapt and change very quickly. Most insect pests of KY field crops have between one and three generations per year. Soybean aphid can have up to twelve generations in a single growing season! This large number of generations provides opportunity for adaptation to occur very rapidly. So what should be done?

1. **Scout fields on a regular basis.** Generally, Kentucky field crops should be scouted at least weekly from plant emergence to maturity. An individual pest species is not expected to be of importance during the entire season. But with the wide variety of disease, insect, weed and vertebrate pests possible, the crop could be at risk from one or more pests at any time during the season. For some pests, making two or three visits per week at certain times will be needed; for others, scouting once every two weeks will be enough. Additionally, the pest species present and infestation intensity can vary with seasonal conditions. Also, management practices may be more effective against certain life stages of a pest than others, so early detection provides the greatest range of options for effective management.

2. **Correctly identify the pest.** This goes for all pests and soybean aphid should be a relatively easy one to work with. If you can identify any aphid, you should be able to ID the soybean aphid. The Soybean aphid is the only aphid in the US known to form colonies on soybean. So, if you see one aphid you may not know what it is. But, if you find an aphid colony, it is very likely that it is soybean aphid. In the cotton growing states to our south, it is not quite so easy. The cotton (aka melon) aphid looks very much like the soybean aphid. We have this insect but not in the large numbers that are found in cotton producing states.

3. **Use a research based scouting method.** There are two scouting methods for soybean aphid. They are a standard 30 plant sample and the Minnesota Speed Scouting method. The standard 30 plant sample will allow you to detect small aphid populations, but takes more time and effort. The Minnesota Speed Scouting method will not detect small populations but will detect populations that require a control decision, it requires less effort and is less time consuming.

4. **Use the established economic threshold** for making management decisions. The current economic threshold for soybean aphid is:

   For plants in the R1 through R5 stages 250 aphids per plant, and 80% of plants infested, and an increasing population.

   This threshold requires at least two samples to establish that the population is on the increase. It also has a built-in seven-day window for making an application.

5. **Use insecticides only when needed.** Applying an insecticide (or even fungicides) when they are not needed puts the natural enemies of soybean aphid at risk. Because aphid populations can increase so fast when not under natural control, making a pesticide application too early can kill the natural control agents and allow the aphids to grow at a very rapid rate.
There are a number of insecticides available for use if the need is there. Remember to use only products registered for use on soybean. (See “Insecticides for use against soybean aphid on soybean in Kentucky” in this issue of KPN.)

SOYBEAN APHID OVER-WINTERING FOR 2005-2006: A PREVIEW by Doug Johnson

The following article appeared in the 12 May 06 issue of The Bulletin, the University of Illinois’ pest newsletter. Dr. Mike Grey, Extension Entomologist and IPM coordinator, provides a review of some early scouting for soybean aphid on its over-winter host plants. Included are comments on how the findings illustrate what might be expected for this season. As we do not believe that soybean aphid over-winters to any great extent in Kentucky, and thus must migrate each year from the more northern states to infest our beans, this information provides a preview of what we might expect for the 2006 season.- dwj

Survey of Buckthorn Reveals Low Soybean Aphid Overwintering Densities

In early May, two seasoned entomologists, Dr. David Voegtlin, Illinois Natural History Survey, and Bob O’Neil, Purdue University, spent four days and 1,300 miles looking for over-wintering populations of soybean aphid in Indiana, Michigan, and Ohio. They carefully examined thousands of leaves of known hosts (Rhamnus alnifolia, alder-leaf buckthorn; and Rhamnus cathartica, common buckthorn). In addition, they searched for soybean aphids on suspected hosts (Frangula alnus, glossy buckthorn; and Rhamnus caroliniana, Carolina buckthorn) [Note: Carolina buckthorn is known to occur in KY. All the other buck thorns listed here either do not occur in KY or are extremely rare – dwj]. They were unable to find any soybean aphids on alder-leaf buckthorn, glossy buckthorn, or Carolina buckthorn. Two colonies of soybean aphids were found on common buckthorn near Bronson, Michigan (located near the Indiana and Michigan border). Infestations of soybean aphids in Michigan reached impressive levels last year, with an estimated 80% of soybean acres receiving an insecticide application.

David Voegtlin coordinated the establishment of the soybean aphid suction trap network throughout the North Central Region and continues to interpret the predictive potential of these data collected each season. David indicates that the 2005 fall flight of soybean aphids in Illinois was greater than fall flights in 2001 and 2003. However, he also noted that the 2005 flight was approximately half of the 2002 and 2004 flights, both of which were followed by more impressive infestations the subsequent growing seasons. Of particular interest is David’s observation that the number of male soybean aphids in the fall flight of 2005 was very low. This observation was common among the cooperators participating in the North Central Region suction trap network. In 2005, the greatest captures of fall migrants occurred in Iowa and Minnesota. If economic infestations develop, David anticipates that we are most likely to see them develop first in these areas of the Midwest. In other areas of the North Central Region, economic levels of soybean aphids may not develop until much later in the growing season. Time will tell. We thank David Voegtlin and Bob O’Neil for sharing the results of their survey efforts!-Mike Gray. The Bulletin, No 7, Article 7, 12 May 2006. http://www.ipm.uiuc.edu/bulletin/article.php?id=511

INSECTICIDES FOR USE AGAINST SOYBEAN APHID ON SOYBEAN IN KENTUCKY by Doug Johnson

The insecticide recommendations for soybean aphid found in ENT-13, Insecticide Recommendations for Soybean – 2006, contain two errors. The errors appear in both the printed and web based versions.

The heading for the Soybean Aphid section is incorrectly listed as Japanese Beetle (Chinese aphid). The Soybean Aphid section directly follows the Japanese Beetle section in both publications. Unfortunately, the “Japanese Beetle” title was somehow duplicated in the Soybean aphid section.

The products listed for Soybean Aphid are correct. However, they are incomplete. This happens sometimes because the printed publications have to be prepared so much in advance of use. Tables included in this article are the most recent information I have available as of this writing.

Management: In most years, aphid populations are held in check by a combination of natural enemies and fungal pathogens, our hot temperature and the required migration from more northern states. The need for treatment is unlikely. However, in the case where populations meet or exceed the threshold, an application should be made within a week.

Sampling: Fields should be sampled multiple times to determine if populations are increasing. Count the number of SBA per plant, or use the ‘Speed Scouting’ technique. See “What will the soybean aphid bring to Kentucky in 2006?” elsewhere in this issue of Kentucky Pest News.

Threshold: 250 aphids per plant, with 80% of plants in-
fested on vegetative – R5 beans, with INCREASING POPULATIONS. In practical terms, aphids should be common (on most or all plants) and abundant (several hundred aphids per plant). Threshold provides a ~7-day treatment window.

**Timing**: Timing is critical. Spraying too early (below the 250 threshold) potentially disrupts natural enemies, leading to higher aphid populations and re-application later in the season. If fields are sprayed too late (honeydew, sooty mold are present), yield has already been lost.

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**Insecticides for use against Soybean Aphid on Soybean in Kentucky 2006**

**Products with National Registration**

<table>
<thead>
<tr>
<th>Insecticide</th>
<th>Company</th>
<th>Rate per Acre</th>
<th>PHI*</th>
<th>REI*</th>
<th>RMG#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baythroid 2</td>
<td>Bayer</td>
<td>2.0 to 2.8 fl. oz.</td>
<td>45</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Helena Lambda</td>
<td>Helena</td>
<td>0.96 to 1.6 fl. oz.</td>
<td>45</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td>Mustang</td>
<td>FMC</td>
<td>3 to 4.3 fl. oz.</td>
<td>21</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Mustang Max</td>
<td>FMC</td>
<td>2.8 to 4 fl. oz.</td>
<td>21</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Mystic Z</td>
<td>Agriliance</td>
<td>0.96 to 1.6 fl. oz.</td>
<td>45</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td>Proaxis</td>
<td>UAP, Tenkoz</td>
<td>1.92 to 3.20 fl. oz.</td>
<td>45</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td>Taiga Z</td>
<td>Agriliance</td>
<td>1.92 to 3.20 fl. oz.</td>
<td>45</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td>Warrior</td>
<td>Syngenta</td>
<td>1.92 to 3.20 fl. oz.</td>
<td>30</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td>Govern 4E</td>
<td>Tenkoz</td>
<td>1.0 to 2.0 pts.</td>
<td>28</td>
<td>24</td>
<td>1B</td>
</tr>
<tr>
<td>Lorsban 4E</td>
<td>Dow</td>
<td>1 to 2 pt.</td>
<td>28</td>
<td>24</td>
<td>1B</td>
</tr>
<tr>
<td>Penncap-M</td>
<td>Cerexagri</td>
<td>1 to 3 pts.</td>
<td>20</td>
<td>4 days</td>
<td>1B</td>
</tr>
<tr>
<td>Warhawk</td>
<td>UAP</td>
<td>1 to 2 pt.</td>
<td>28</td>
<td>24</td>
<td>1B</td>
</tr>
<tr>
<td>Whirlwind</td>
<td>Helena</td>
<td>1 to 2 pt.</td>
<td>28</td>
<td>24</td>
<td>1B</td>
</tr>
<tr>
<td>Yuma 4E</td>
<td>Agriliance</td>
<td>1 to 2 pt.</td>
<td>28</td>
<td>24</td>
<td>1B</td>
</tr>
</tbody>
</table>

**Products of Companies Issuing 2(ee) Registrations**

<table>
<thead>
<tr>
<th>Insecticide</th>
<th>Company</th>
<th>Rate per Acre</th>
<th>PHI*</th>
<th>REI*</th>
<th>RMG#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artic 3.2 EC</td>
<td>Agriliance</td>
<td>4 to 8 fl. oz.</td>
<td>60</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Furadan 4F</td>
<td>FMC</td>
<td>1/4 to 1/2 pt.</td>
<td>21</td>
<td>48</td>
<td>1A</td>
</tr>
<tr>
<td>Cheminova Acephate 90</td>
<td>Cheminova</td>
<td>0.83 to 1.1 lbs.</td>
<td>14</td>
<td>24</td>
<td>1B</td>
</tr>
<tr>
<td>Chlorpyrifos 4E AG</td>
<td>Makhteshim</td>
<td>1 to 2 pt.</td>
<td>28</td>
<td>24</td>
<td>1B</td>
</tr>
<tr>
<td>Orthene 75 S</td>
<td>Valent</td>
<td>1.0 to 1.33 lbs.</td>
<td>14</td>
<td>4</td>
<td>1B</td>
</tr>
<tr>
<td>Orthene 75 WSP</td>
<td>Valent</td>
<td>1.0 to 1.33 lbs.</td>
<td>14</td>
<td>24</td>
<td>1B</td>
</tr>
<tr>
<td>Orthene 90 S</td>
<td>Valent</td>
<td>0.83 to 1.1 lbs.</td>
<td>14</td>
<td>24</td>
<td>1B</td>
</tr>
<tr>
<td>Orthene 97</td>
<td>Valent</td>
<td>0.75 to 1 lbs.</td>
<td>14</td>
<td>24</td>
<td>1B</td>
</tr>
</tbody>
</table>

*PHI = Pre-Harvest Interval in Days
*REI = Restricted Entry Interval (in hours unless otherwise stated)
*RMG = Resistance Management Group
Product Efficacy: It is important to get excellent coverage when treating for aphids. Use the highest pressure and gal / acre practical when spraying, and choose a nozzle type recommended for insecticide coverage. When tank-mixing insecticides with other products, be sure to maximize the application for insecticide coverage. Including insecticides as insurance when other products are being applied is discouraged. This often leads to improper timing, inappropriate sprayer setup (nozzles, pressure etc.) and provides unneeded selection pressure for production of insecticide resistant aphids. Application timing and coverage are by far more important than which product is selected for use.

Listed below are products that are labeled for control of soybean aphid and are registered for use in Kentucky. These products carry one of two types of labels. In the first list are products that claim control of soybean aphid on their national label. You do not have to have additional label material in order to use these products against the soybean aphid. In the second list are products for which the soybean aphid does NOT appear on their national label but the company claims control of soybean aphid by issuing what is called a “2(ee)” label. In order to be in compliance with this label the applicators must have a copy of the “2(ee)” label in their possession.

Note that some of these products are not as common in KY as others. In addition to the name of the product, the company which sells it and the use rate per acre, there are three other important pieces of information. The PHI or PreHarvest Interval tells you how many days must go by between application and harvest. The REI or Restricted Entry Interval tells you how many hours (in one case days) must go by between application and when a worker can go back into that field without the required PPE or Personal Protective Equipment. The RMG or Resistance Management Group shows you which compounds act against the soybean aphid in the same way. If you make multiple applications you should choose an insecticide from a different RMG group for each application.

KY JOINS WITH OTHER STATES TO ADD SOYBEAN APHID TO THE SOYBEAN RUST SENTINEL SYSTEM
by Doug Johnson, Extension Entomologist

If you are using the USDA Soybean Rust Information site you will find a major new addition for the 2006 season. Information on the Soybean Aphid will also be available on this same site. Kentucky, along with many other states in the soybean belt, will be monitoring the progress of this insect pest throughout the season and posting the information on the web site. You will find that the aphid “site” will have a very similar look and feel to the Soybean Rust “site”. It will be a simple matter of selecting which pest one wishes to check on. Movement from Rust to Aphid will be as simple as a single click on the page.

States vary in how they will gather and report data, though it will be done in a very similar manner across states. In Kentucky, the same sentinel sites will be monitored by the same people for both Soybean Rust and Soybean Aphid. Information of crop stages, Rust progress and aphid movement will be provided.

Additionally, commentary will include information from other soybean aphid reports and the UK-IPM Aphid suction trap. See: KPN #1092, 12 May 06, for information about Kentucky’s aphid trap.

LAWN & TURF

RHIZOCONTONIA LARGE PATCH
by Paul Vincelli

About the only serious disease problem in zoysia is Rhizoctonia large patch (sometimes referred to in older literature as Zoysia Patch). Bermudagrass is also susceptible, though damage is often not as severe as on zoysia and it is quicker to recover. Affected patches show up as circular areas as large as 15-20 ft of damaged turf.

Large patch is favored by chronic high soil moisture and close mowing height. When the disease is active, during cool, rainy weather in spring or sometimes fall, one will see a bright orange-brown color at the margin of the patch.

Management suggestions include improving drainage in affected fairways by filling low areas or installing tile drainage. Avoid over-irrigation, especially in spring and autumn. Avoid adding nitrogen fertilizer in September or during periods in spring when the disease is active. On fairways, raise the mowing height by 0.25 inch in mid-to late-September. Studies at Kansas State suggest that disease development is not influenced by nitrogen rate and source or by preemergence herbicides.

On zoysia with a history of the disease, one or two preventive fungicide applications can be helpful. The most effective fungicides in published research include Heritage, Prostar, and fungicides containing triadimefon (such as Bayleton) or PCNB. Application of fungicide in the autumn is the most important time. Make the initial application when thatch temperatures drop below 70°F, usually in mid- to late September. Under Kentucky condi-
Dogwood anthracnose

The ash anthracnose fungus is a species of Discula sp. or by Kabatiella apocrypta. Leaf spots with brown, somewhat angular symptoms associated with Kabatiella are being observed most commonly now. There is considerable variation in maple susceptibility to anthracnose. In some cases, sugar maple leaf spotting may be heavy on one tree while the adjacent tree is barely affected.

Oak anthracnose

This disease is less common here and is caused by the fungus Apiognomonia quercina.

Sycamore anthracnose

Anthracnose symptoms have become noticeable on sycamore in the past week. On infected green, expanding leaves, look for irregular dark, necrotic blotching centered along the leaf veins or leaf edges. These dark blotches may turn a tan color as the diseased areas of the leaves dry out. In the same trees, tips of young shoots with newly expanding leaves are wilting and dying because of twig or shoot infection. With continued rainy weather, the disease should continue to spread in the foliage. Symptoms are not as severe as we see some years when trees are heavily defoliated by now. As the weather gets warmer and drier, sycamores normally put out new, healthy foliage. However, the legacy of crooked branches (because lateral shoots take over when terminals are killed by anthracnose) and multiple shoots arising from the base of a killed branch may still be visible many years later. Sycamore anthracnose is caused by the fungus Apiognomonia veneta, and the fungus attacks both sycamore and London plane.

Kentucky growers and gardeners should know how to grow and maintain healthy landscape trees. For most trees, anthracnose disease is not lethal, but it can be for dogwoods. Good growing practices are important in reducing the effects of anthracnose and in preventing loss of dogwoods from anthracnose. Consider the following:

- Rake up and compost fallen leaves. Leaves can be a source of inoculum.
- Prune out and destroy dead twigs and branches, because for many of the anthracnose fungi, branches harbor fungal inoculum. Although it is difficult to prune large trees, small trees are at greater risk, so prune out dead twigs and branches from them. For dogwoods, pruning out dead branches and water sprouts is especially important where anthracnose might be a threat.
- Avoid unnecessary wounding and avoid construction or other activities which could injure the roots or the branches.
- Provide mulch as needed. Maintain a 2-3 inch layer of mulch over the root zone of the tree (but not against the trunk) to help maintain soil moisture and to protect trees from lawnmower injury.

On bermudagrass, late-spring fertilization with nitrogen will help many swards outgrow the damage without the need for springtime application of fungicide.

SHADE TREES & ORNAMENTALS

ANTHRACNOSE DISEASE SYMPTOMS APPEARING IN LANDSCAPE TREES

by John Hartman

Cool, wet weather in spring favors the fungi that cause anthracnose diseases in landscape trees. Symptoms of infections that occurred during recent weeks are appearing in several tree species. Although anthracnose diseases are common this year on landscape trees and also on some fruit crops, they are not all caused by the same fungus. Each host plant has its own anthracnose fungus, so, for example, don’t assume that anthracnose of sycamore or grape is a threat to nearby dogwoods. The incidence and severity of anthracnose diseases of landscape trees varies with the season, and this year, symptoms appear to be at moderate levels.

Ash anthracnose. Brown blotches along leaflet edges have been visible for the past week or so on new ash foliage. Many of these infected leaflets will begin to drop soon and carpet the walks and lawns nearby. Ash anthracnose is not normally a threat to ash tree survival, however, and the ash trees will simply put out a new set of leaves. The ash anthracnose fungus is a species of Discula.

Dogwood anthracnose. Caused by the fungus Discula destructiva, dogwood anthracnose is appearing this spring in many Kentucky flowering dogwoods (Cornus florida). Dogwood anthracnose causes leaf spots, leaf blight, and lower branch dieback and is most commonly observed in forested regions where native understory dogwood trees are threatened. This spring, anthracnose is also present in landscape trees, especially those growing in shaded locations.

Maple anthracnose. Symptoms can range from leaf spots to shoot blight and shoot cankers. Maple anthracnose may be caused by Discula sp. or by Kabatiella apocrypta. Leaf spots with brown, somewhat angular symptoms associated with Kabatiella are being observed most commonly now. There is considerable variation in maple susceptibility to anthracnose. In some cases, sugar maple leaf spotting may be heavy on one tree while the adjacent tree is barely affected.
• Protect trees from drought by watering at least once a week during dry periods. Do not use overhead sprinklers for watering; wet foliage favors infection.
• Do not transplant dogwood trees from the wild. Purchase healthy trees from a reputable nursery.
• Anthracnose is favored by a moist environment. Select a planting site with a sunny eastern exposure to promote rapid foliage drying early in the day.
• Diagnose and treat insect and disease problems appropriately.
• Plant disease resistant dogwoods such as *C. florida* ‘Appalachian Spring’ or oriental dogwoods (*Cornus kousa*) for high risk sites such as those with heavy shade and nearby diseased trees.
• Although most anthracnose diseases can be controlled using fungicides, the attempt is usually more costly than the benefit. Dogwoods which are threatened by anthracnose may benefit from early spring fungicide applications.

**DIAGNOSTIC LAB-HIGHLIGHTS**

*by Julie Beale and Paul Bachi*

Agronomic samples received in the PDDL this past week included glume blotch on wheat; Pythium root rot, target spot, nitrogen deficiency, aphid feeding injury, and injury from cold (rapid temperature change) and frost on tobacco transplants.

On fruit and vegetable samples, we have diagnosed anthracnose and black rot on grape; fire blight, powdery mildew and aphid injury on apple; lettuce drop (*Sclerotinia*); and Fusarium wilt on basil.

Ornamental samples included Pythium root rot on lavender; *Volutella* blight on pachysandra; powdery mildew and black spot on rose; anthracnose on ash and sycamore; spot anthracnose on dogwood; *Rhizosphaera* needlecast on spruce; and tip blight on pine.

**INSECT TRAP COUNTS**

*UKREC, Princeton KY*

*May 12-19, 2006*

<table>
<thead>
<tr>
<th>Insect Name</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black cutworm</td>
<td>9</td>
</tr>
<tr>
<td>True Armyworm</td>
<td>71</td>
</tr>
<tr>
<td>European Corn Borer</td>
<td>0</td>
</tr>
<tr>
<td>Corn Earworm</td>
<td>1</td>
</tr>
<tr>
<td>Southwester Corn Borer</td>
<td>1</td>
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</tbody>
</table>

View trap counts for the entire 2006 season at –  
http://www.uky.edu/Ag/IPMPrinceton/Counts/2006trapsfp.htm

For information on trap counts in southern Illinois visit the Hines Report at –  
http://www.ipm.uiuc.edu/pubs/hines_report/comments.html

The Hines Report is posted weekly by Ron Hines, Senior Research Specialist, at the University of Illinois Dixon Springs Agricultural Center.

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.