**September 13, 2004**

<table>
<thead>
<tr>
<th>Number 1036</th>
<th>September 13, 2004</th>
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</thead>
<tbody>
<tr>
<td><strong>TOBACCO</strong></td>
<td><strong>FRUIT CROPS</strong></td>
</tr>
<tr>
<td><strong>CURRENT BLUE MOLD STATUS</strong> by William Nesmith</td>
<td><strong>SEED TREATMENTS AND WIREWORMS</strong> IN 2004 by Ric Bessin</td>
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<tr>
<td>Tobacco harvest is well underway in all regions of Kentucky, so most growers are not focused on blue mold. Blue mold remains active in most communities, mainly building up on ground-suckers and sucker regrowth, but in most cases little new damage is occurring to the production crop. The mature tobacco plant is very tolerant of blue mold. However, some late-set crops are still being “hammered” by blue mold - mainly vein, midrib, and stem damage.</td>
<td>The demand for pre-applied seed treatments for field corn was tremendous in Kentucky for 2004. This was expected as the seed treatments are touted as particularly effective in controlling secondary soil insects, and we have more than our share of secondary soil insect pests including wireworms, white grubs, seedcorn maggot, and cutworms. The pre-applied seed treatments I am discussing include Gaucho Extra, Prescribe, Cruiser, Poncho 250, and Poncho 1250. A few of these were new for the 2004 season.</td>
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<td>Moreover, harvesting efforts are being seriously complicated as a result of earlier blue mold activity and labor shortages. Where the disease went systemic early in the season, a large percentage of plants are on the ground greatly adding to the cost and physical burdens of tobacco harvest. With a shortage of harvesting laborers, crews are being selective as to what tasks they accept. Several growers have reported that they have had to pay as much as a third more to get such “down-crops” harvested. One harvest crew in central Kentucky reported that their normal harvest rate was 1000-1200 sticks per day, but their harvest rate dropped to 600 sticks per day in downed tobacco. Also, severe houseburn and softrot is being reported from several regions, especially of crops harvested prematurely due to the leaf spotting complex and labor shortages. Much of the state has experienced very conducive conditions for houseburn during the past month.</td>
<td>These treatments are very popular for several reasons. First, several of these are relatively cheap as compared to soil-applied insecticides, some less than half the price of a typical soil insecticide application. Since the treatment is on the seed, there is no additional equipment needed for the planter, hence no additional hopper boxes or tanks to fill and no calibration is needed. As many growers are trying to farm larger acreages, reducing labor and management time per acre has become very important.</td>
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<td>Frogeye activity remains very high in most regions of the state. Some have called about the status of the emergency label for Quadris. As of September 10, the emergency label was still in effect.</td>
<td>Most growers were very happy with the performance of the seed treatments in 2004. However, there were a few instances in Kentucky where the seed treatments did not provide the level of wireworm protection that the growers hoped for. These problem fields were in parts of Hardin, Shelby, and Oldham counties. Growers complained of poor wireworm control with some of these seed treatments. I heard of no other complaints about the seed treatments from other parts of the state.</td>
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<td>The collection phase of the Oospore Survey required for marketing tobacco to China has been completed. Samples from all regions of the state have been submitted to the appropriate USDA APHIS PPQ laboratory for their analysis.</td>
<td>This past spring I visited one of those sites in Hardin County where I had been fortunate enough to conduct an insecticide study for wireworm control. The field was planted early, April 8, with a high-amyllose corn hybrid that was not particularly vigorous. After planting, the weather turned cold and the soils cooled delaying seedling emergence. The corn began to emerge 21 days</td>
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Angoumois Grain Moth in Ear Corn

by Lee Townsend

The Angoumois grain moth (AGM) is a primary pest of stored grain in that the small larvae develop inside individual kernels of ear corn. A small, round hole in the kernel is a tell-tale sign of infestation. This insect rarely damages shelled corn.

Feeding by AGM larvae produces empty kernels with little nutritional value and an unpleasant odor that accompanies infestations can cause livestock to reject it. The fines and seed remnants that they leave can be food for secondary grain pests, such as the flour beetles.

AGM infestations can begin in the field where the small tan moths lay eggs directly on kernels. However, most infestations probably cycle at the corn crib where emerging moths infest more kernels. This is the clue to long term management of the insect.

This study indicated that Poncho 250 and Gaucho Extra were overwhelmed with the level of wireworm pressure. But the other insecticide treatments at their respective rates also suffered serious stand loss to wireworms. It must be noted that the Force 3G and the low rate of the Capture 2EC were applied at rates below the recommended label rate. This study illustrates out several key points, that the seed treatments and other soil insecticides can be overwhelmed when wireworm numbers are excessive. Planting early into cold soils with low-vigor hybrids can also result in more severe wireworm loss as the corn is slow to germinate and grow out of the young seedling stages vulnerable to wireworm attack.

Once stand loss due to wireworms is observed, there are no rescue treatments that will provide effective control. The only wireworm strategies we have must be in place at planting. If loss to wireworms is severe, then the decision to replant needs to be addressed and if replanting is necessary, then a treatment for wireworms applied.

There are a few new issues associated with these seed treatments. As the seed is now coated with an insecticide, care should be taken not to leave spilled seed exposed on the ground for birds and other wildlife to consume. Also treated seed should never be used for feed.

SOYBEANS

SOYBEAN & GRAIN SORGHUM INSECT THREAT IS NOT OVER! CHECK FOR THE TERRIBLE TRIOS!

by Doug Johnson

By September we think that the insect season in Kentucky must be over but this far from true. Never mind the stored grain insects, that is a different problem, there are still insects in soybeans and grain sorghum fields to consider.

In the previous newsletter, we talked about late season pests of grain sorghum and soybean aphid in soybeans. Both of those situations still exist and the key to potential damage lies in the growth stage of your plants. Since that article there has been a large upsurge in trap captures of corn earworm (also know as soybean podworm) and fall armyworm. These insects can damage both soybean and grain sorghum.

The likelihood of an economically important infestation is small, so it does not pay to simply go out and blast your late-maturing crops with an insecticide. This is not appropriate in dollars and cents, environmentally, or in terms of human safety. However, it is appropriate to make that extra trip out into the fields to look for insect activity. Then, you can make an appropriate decision. As with all insect problems in Kentucky field crops, the

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Stand count/A</th>
<th>Stand count/A</th>
<th>Stand count/A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4/29/04</td>
<td>5/7/04</td>
<td>5/20/04</td>
</tr>
<tr>
<td>No treatment</td>
<td>13,177</td>
<td>11,215</td>
<td>&lt;9,000 (replanted)</td>
</tr>
<tr>
<td>Gaucho Extra</td>
<td>16,596</td>
<td>15,891</td>
<td>14,914</td>
</tr>
<tr>
<td>Poncho 250</td>
<td>20,103</td>
<td>21,405</td>
<td>15,195</td>
</tr>
<tr>
<td>Capture 2 EC (0.35/1000')</td>
<td>19,667</td>
<td>19,870</td>
<td>14,999</td>
</tr>
<tr>
<td>Capture 2 EC (0.175/1000')</td>
<td>21,301</td>
<td>20,762</td>
<td>16,158</td>
</tr>
<tr>
<td>Force 3 G (2 oz/1000')</td>
<td>19,297</td>
<td>20,121</td>
<td>16,807</td>
</tr>
</tbody>
</table>

The best strategy would be to feed out all stored grain before harvest of the 2004 crop and completely clean out and treat the empty storage area with an approved residual insecticide. If that is not practical, it would best to shell and grind the remaining corn. This will destroy insects developing in the kernels. Then, thorough sanitation around the corn crib can help to reduce small carryover populations of the insects that are completing development in spilled grain.
important decisions are: “if”, “if so when”, then “what to use” for control; in decreasing order of importance.

The potential players in grain sorghum are: fall armyworm, corn earworm, and sorghum webworm. These head feeders are easy to find and count, and are pretty easy to control. The plants at risk are those in the soft dough or earlier stages of development. This is really a pretty simple decision to make.

Soybean presents a little different case. The players are soybean aphid, soybean podworm (corn earworm) and fall armyworm. And, you can add the green stink bug to the mix.

Soybean aphid is important if your plants are still in the early bloom to early pod fill stage (R1-R4). At this point, the economic threshold is 250 aphids per plant. At R5-R6, the threshold is not determined but is likely about 1,000 aphids per plant. After R6, insecticide tests have not shown any return to investment.

Soybean podworm and fall armyworm are caterpillars and they can occur together in fields. The fall armyworm is primarily a foliage feeding pest and is evaluated like any other foliage feeding pest (% defoliation). On the other hand, soybean podworms feed directly on the pods. This may result in one or more beans being eaten, opening the pod to pathogen entry, and sometimes damaging the petiole. Petiole damage can result in the lack of movement of nutrients into the bean, abortion of the pod, or simply cutting the pod from the plant. For this reason, this pest is considered one of the potentially most important late season soybean pests. When you find on average, two or more soybean pod worms per row foot (30” rows) treatment is highly recommended.

Green stinkbug is another often-missed pest in late season soybeans. This critter causes damage that is usually not seen until after the harvest is done. They feed with piercing-sucking mouth parts, which are inserted through the pod wall and into the bean. The results are shrunken, disfigured, and discolored beans. You must find these insect in the canopy to determine the level of danger.

You can find scouting procedures, economic thresholds, and information on identification and biology for these pests in the UK-IPM Scouting manuals. These manuals can be viewed and downloaded from the UK-IPM web site at:
http://www.uky.edu/Agriculture/IPM/ipm.htm
Click on “Manuals & Fact Sheets”.

You can find thresholds, and pesticide use information on these and other insect pests of field crops at the Department of Entomology, “Insecticide Recommendations for Insect Pests of Field Crops” web pages at:
http://www.uky.edu/Agriculture/PAT/recs/rechome.htm

As always, you can get help with these publications from your local County Extension Office.

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FRUIT CROPS

TREE FRUITS - DISEASE CONTROL IN LATE SUMMER AND FALL
by John Hartman

Now, while memories of the growing season are still fresh, it is time for apple and peach growers to assess their disease management successes and deficiencies. Armed with this knowledge, there are several kinds of activities relating to this year’s and next year’s tree fruit disease control that growers can accomplish now and in the autumn. The following list of tasks can be used as a reminder for fruit growers who need to reduce losses caused by diseases.

- **Apple Scab.** Continue fungicide applications for late-maturing varieties. Cool, moist weather can favor establishment of the scab fungus on ripening fruit or for pinpoint scab to occur on fruit in storage. Later this fall, reduce the potential for high inoculum levels affecting next year’s crop by mowing to chop up the fallen leaves to hasten leaf decomposition. Growers ordering trees for fall planting to establish new blocks of apple trees will want to consider scab-immune varieties.

- **Apple Fire Blight.** Fire blight was not too severe this year, but where it was, record those trees where fire blight was present while it can still be seen and be prepared to carefully prune out all cankers during the dormant season. Keep track of apple cultivars in which fire blight is most difficult to control. As new apple cultivars are considered for planting, avoid fire blight susceptible varieties and rootstocks such as M.26. Avoid interplanting apples and pears and consolidate susceptible varieties in new plantings for ease of chemical control application later on.

- **Cedar Apple Rust.** If rust has been a problem, plan on removing cedars so that they are not present anywhere near the orchard. Removal to a 1 to 2 thousand feet distance is desirable, but sometimes not practical.

- **Apple Powdery Mildew.** No controls needed now.

- **Apple Fruit Diseases.** Sooty blotch and flyspeck can be scrubbed off the surface of infected apple fruits with the aid of a solution containing bleach. However, this treatment is laborious and will likely reduce the length of time treated fruits can be stored before sale. Carefully examine those areas of the orchard where sooty blotch and flyspeck or pre-harvest fruit decays are most serious. Determine whether the problem is caused by poor spray coverage such as at row ends, by too dense growth of the apple trees, by inoculum produced in dead limbs and branches, or by too much inoculum coming from wild sources nearby. Find ways to remedy these problems. Remove fruit mummies from the trees and orchard floor. Locate dead spurs, twigs and branches in the trees so that pruning and dormant spray applications are more effective later. Prepare a place to bury or burn next winter’s pruning. Remove unwanted brush and woody growth around the orchard perimeter so that sources of sooty blotch, flyspeck and other fungal inoculum are reduced. This will also improve air movement and ventilation, thus creating an environment less favorable for disease.

- **Apple Collar Rot.** Wet periods during this past growing season may have revealed parts of the
RUSTRS ON COOL-SEASON GRASSES by Paul Vincelli

Leaf rusts are very common on several cool-season turfgrasses, including tall fescue, Kentucky bluegrass, and perennial ryegrasses. The generally cool-wet weather this summer has been very favorable for their development. The disease is readily recognizable in the field from its tiny, orangish pustules of powdery spores that erupt from within the leaf blade, eventually causing leaf blades to turn yellow and dry up. The disease does not kill turf outright but can weaken it if severe.

Under Kentucky conditions, these leaf rusts of turfgrasses usually are significant problems only in swards that are growing slowly, such as those that are low in nitrogen (the predominant factor this season) or low in soil moisture. Since autumn is a very important time to fertilize swards of cool-season turfgrasses in Kentucky to help promote root growth and overall vigor, swards that are showing substantial levels of rust may simply need to be fertilized. For particularly high-value swards where there may be interest in spraying fungicides, the most effective products are those that contain azoxystrubin, mancozeb, propiconazole, triadimefon, or chlorothalonil (but note that several years ago chlorothalonil lost its label for use on residential lawns).

MASSES BOXELDER BUGS APPEAR
By Lee Townsend

Large numbers of dark gray and red boxelder bugs can be seen accumulating on sunny tree trunks and south or west sides of buildings in early fall. The smaller nymphs are mostly red with some yellow and black markings.

These sap feeding insects, harmless to humans and pets, are often just a passing curiosity outdoors. However, they can be a nuisance as accidental invaders in structures. These bugs will crawl into cracks and crevices to find shelter for the winter. This can mean that they enter houses and buildings through any of a number of small openings and stain curtains and walls.

It is best to deal with the insects outdoors rather than trying to eliminate them after they have entered a structure. Accumulations on outside walls can be treated directly with insecticidal soap or any of a number of over the counter “lawn and garden” insecticides. It is generally better to use a vacuum cleaner against those that are indoors. Brushing or swatting can crush them leaving unsightly stains. Insecticide applications in the home can cause more harm than good in a case like this.

DIAGNOSTIC LAB-HIGHLIGHTS
by Julie Beale and Paul Bachi

Over the past two weeks we have received diagnostic samples of Cercospora leaf spot on alfalfa; sudden death syndrome, frogeye leaf spot, pod and stem blight, and potassium deficiency on soybean; black shank, blue mold, frogeye leaf spot, and Pythium root rot on tobacco.

On fruits and vegetables, we have diagnosed Rhizoctonia root rot on blackberry; leaf spot (Coccozymes) on cherry; internal breakdown on pecan; anthracnose and rust on bean; and watermelon mosaic virus on watermelon.

On ornamentals and turf, we have seen bacterial wilt on chrysanthemum; Rhizoctonia root rot on ivy; leaf blight on chestnut; blossom blight (Botrytis) on Crepe myrtle; powdery mildew on hawthorn; leaf spot (Cristulariella) on maple; leaf spot (Phloeospora) on mulberry; Actinopelte and Elsinoe leaf spots and bacterial scorch on oak; white pine decline; Verticillium wilt on redbud; Phytophthora root rot on rhododendron; and summer patch on bluegrass.

INSECT TRAP COUNTS

UKREC, Princeton, KY
August 27 - September 3, 2004

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<th>Insect</th>
<th>Count</th>
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<td>Black cutworm</td>
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</tr>
<tr>
<td>True armyworm</td>
<td>0</td>
</tr>
<tr>
<td>Corn earworm</td>
<td>0</td>
</tr>
<tr>
<td>European corn borer</td>
<td>88</td>
</tr>
<tr>
<td>Southwestern corn borer</td>
<td>19</td>
</tr>
<tr>
<td>Fall armyworm</td>
<td>20</td>
</tr>
<tr>
<td>Fall armyworm</td>
<td>24</td>
</tr>
</tbody>
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September 3 - 10, 2004

Black cutworm ........................................... 0
True armyworm .......................................... 0
Corn earworm ........................................... 4
European corn borer ................................. 1
Southwestern corn borer ............................ 2
Fall armyworm ......................................... 23

You can now view trap counts for the entire season on the IPM website. From the opening page found at http://www.uky.edu/Agriculture/IPM/ipm.htm, click on Pheromone Trap Counts. Then click on “2004 Data” to view or you can go directly to the 2004 data at - http://www.uky.edu/Ag/IPMPrinceton/Counts/2004trapsfp.htm.

On this new page you will find links to view trap counts for Fulton County, Kentucky and the Hines Report which contains information on trap counts in southern Illinois.

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.