**ANNOUNCEMENTS**

**PASTURES**
- Firewood pests

**PESTICIDE NEWS & VIEWS**
- Pristine®, a New Fungicide for Fruit Crops Disease Control

**TOBACCO**

**BLUE MOLD OOSPORES NOT FOUND IN KENTUCKY’S BURLEY TOBACCO.**

by William Nesmith

Recall that the trade agreement established between the United States (U.S.) and The Peoples Republic of China (China) in 2001 allowed U.S. flue-cured and burley tobaccos to be imported into China. Those protocols allow China to import dried U.S. tobacco that is free of active tobacco blue mold oospores. This spore stage is the product of sexual reproduction by the agent causing blue mold, *Peronospora tabacina*. Fortunately, the oospore stage is not commonly found in U.S. tobacco during blue mold epidemics, but it does occur sometimes. Consequently, it is required that all U.S. tobacco exported to China will be inspected for blue mold oospores at two points before shipment - in the production fields and in the shipping containers.

China has successfully imported burley tobacco under this trade agreement. For example, in March 2003 the Burley Tobacco Growers Cooperative Association based in Lexington, Kentucky exported approximately a million pounds (farm-market equivalent) of burley to...
China.

During August and September, the University of Kentucky College of Agriculture, coordinated by the Plant Pathology Department, continued to assist Kentucky’s burley growers in this marketing effort by conducting another survey for the USDA APHIS PPQ. The field inspection-survey for the 2003 crop required a major effort because blue mold was widespread about the state this season. This survey involved collecting green leaf tissues with blue mold lesions taken directly from the field during the active period of the 2003 epidemic. Burley samples from 86 counties (representative of Kentucky’s marketing areas for the 2003 crop) were collected according to the prescribed protocols and submitted to the Kentucky Office of State Entomologist, who submitted them to APHIS.

We learned last week that NO OOSPORES were found during microscopic examination of the Kentucky samples by the laboratory conducting these tests for the USDA APHIS PPQ. These findings should place Kentucky’s tobacco in good standing for exporting again to China, assuming consistent results are obtained from neighboring states that also had blue mold since the burley tobacco exported from here also contains tobacco from our neighbors in Indiana, Missouri, Ohio, and West Virginia.

**CORN**

**CORN STILL IN FIELD SHOULD BE CHECKED FOR STALK STRENGTH**

by Paul Vincelli

Producers who have left corn in the field should check the stalk strength of those fields. Although I have not seen or heard of significant stalk rot problems this season, several factors could conspire to create a problem in unharvested fields.

1. Yields have generally been very good in many locations this year. High yields increase the risk of stalk lodging, for two reasons: (1) the heavy ear makes the plant more prone to topple in a strong wind, and (2) the developing grain may be filled out with carbohydrates mobilized from the stalk.

2. Wet soils early could have resulted in poor root development. Although root systems were adequate to grow corn, these deteriorate once the plants go into senescence. If root systems were limited to begin with, there may be very little left to anchor the plants in the ground.

Check standability of corn crops still in the field by walking through the field and pushing the stalks 10-12” from vertical. Those that lodge easily are weakened. If 10-15% of the plants show weakened stalks, it is advisable to schedule the field for harvest soon, before it is blown over in a strong wind.

**CORN SEED TREATMENTS OFFER NEW OPTIONS FOR SOME PESTS**

by Ric Bessin

Seed treatments are offering new options for control many of the more common insect pests of corn. There are now several commercially applied seed treatments that can be specified on seed when seed orders are placed. Some of the insects that are controlled with these treatments include flea beetle, white grubs, wireworms, rootworms, black cutworm, seedcorn maggot, and corn leaf aphid.

But growers need to be aware that not all of the seed treatments provide the same level of protection. For example, seed treatments containing clothianidin (Poncho) have provided very good control of black cutworm in University of Kentucky trials. Growers should also be aware that some of the treatments may be available at different rates on the seed, the higher rates providing longer control and often controlling additional pests. An example of this is imidacloprid, where Gaucho is the lower rate and Prescribe is the higher rate. Pay attention to the pests that can be controlled with these treatments, and match the proper seed treatment with the known pest problems in a particular field.

Many of the new seed treatments are systemic, and will move through the plant to provide control in some cases above and below ground. These seed treatments must be ordered on the seed and cannot be applied on farm. They are virtually dust free formulations that will help to reduce exposure while loading seed into hoppers. This is in contrast to the powdery hopper box treatments that are still available for on-farm application.

There are now many alternatives for control of soil insect pests in corn including crop rotation, granular insecticides, liquid insecticides, seed treatments, and biotech varieties for certain pests. When deciding which strategy that will used to control soil insect pests in corn, consider the price of control alternatives, the pests that need to be controlled, the equipment that is needed, and the degree of control that can be expected. The cost of control can be compared to the level of risk a grower is will to accept. Growers should always consider using rotation as a means to reduce soil insect problems in
corn where practical, it is often the most economical strategy for certain pests.

**STORED GRAIN**

**PROTECTING STORED SEED FROM INSECTS**

By Doug Johnson

Protecting stored seed is a somewhat different task form protecting stored grain/feed in the food/feed system. The same insects attack the seed and some of the tools for prevention and control are the same. However, several of the tools are different and the type of protection needed is different.

Two general groups of insecticides available for protecting stored seed. The first group is labeled for controlling stored grain pests during storage while the second group is labeled to protect the seed after planting. Products labeled for stored seed are Actellic, Reldan and Storcide. These products are specifically labeled against stored products insects such as bran bugs, weevils grain moths, etc. Actellic, Reldan and Storcide are approved for use on commodities that are destined for food and feed.

Formulations of Cruiser, Gaucho, and Lorsban are labeled for protecting the seed. Most often they provide protection of the seed as it germinates and in the small seedling stages, from insects in and on the soil (wireworm, aphids, seed beetles and maggots etc). They may also provide protection from stored grain insects but are for use on seed to be planted, not for use in the commodities immediately destined for food and feed.

The seed storage manager must look closely at the intended use of that seed/grain and whether or not that use is likely to change. Also, the manager must decide whether or not the seed/grain must be able to germinate or will simply be in a bulk that needs to be protected from becoming “buggy”.

Regardless of the route chosen, the pesticide label must be examined closely. Not all company claims are equal in either the list of pests for which protection is claimed, the ease of treatment, or the level of protection given.

The tips listed below help protect seed. However, they assume that the seed is initially free from insect infestation. Infested seed must be fumigated to control existing populations then treated with one of the seed protectants.

1. **Thoroughly clean the storage area.** Use shovel, broom and vacuum cleaner. Remove all old grain, broken pieces and grain dust from the area.
2. **Treat the storage area.** Tempo SC Ultra at a rate of 0.27 fl. to 0.54 fl. oz. (8 to 16 ml) per gal of water is a good choice for this. Apply as a general surface, spot, crack and crevice treatment. Tempo SC Ultra may **NOT** be applied to the grain. Other insecticides may be used. However, using a different insecticide for treating the premises than is being applied to the seed is a good idea.
3. If the storage area can not be adequately cleaned it may have to be fumigated.
4. **Thoroughly clean the seed.** Many of the most common insect pests can not live on whole, solid kernels. Most infestations are based on broken, or cracked kernels and dust.
5. Consider applying a seed/grain protectant. If you do this follow the label closely!
6. “Small” quantities of seed can be stored in a cooler. Temperatures below 50°F will prevent insect damage.

**PASTURES**

**RUSTS ON COOL-SEASON GRASSES IN HORSE PASTURES**

by Paul Vincelli, Extension Plant Pathologist

Bob Coleman, Extension Equine Specialist

Rust infections are currently very abundant on cool-season grasses in pastures and lawns. Rust diseases are caused by fungi which infect the foliage and produce small (1-3 mm), orange pustules erupting from leaves. Often pustules are surrounded by a yellow halo; eventually, the entire leaf turns yellow and dies. While rust diseases of cool-season grasses are common every year in the autumn, the predominance of cool, rainy weather this past growing season has been especially favorable for leaf rusts of cool-season grasses. Kentucky bluegrass and perennial ryegrass are especially affected, although I have seen rust on tall fescue and orchardgrass, as well.

The presence of severe rust in pastures has gotten the attention of horse managers in central Kentucky. Understandably, after the devastating outbreak of Mare Reproductive Loss Syndrome in 2001 (which has been tied to the Eastern Tent Caterpillar), horse managers are concerned whenever an unusual level of a pest/disease problem occurs. It should provide a measure of reassurance that we are aware of no risk of mycotoxins from these fungi. While there are always new mycotoxins to be discovered, nowhere in a substantial literature collection available to the first author is there mention of any rust fungus as a source of any mycotoxin.

The reddish pustules are sources of fungal spores, which can create a concern for dustiness and subsequent respiratory problems. The grass material baled and fed...
as hay or used as bedding could be excessively dusty, so horse managers should be on guard for those situations. A risk of excessive dustiness in open pastures seems unlikely, because of rapid dilution of spores in air currents and breezes.

HOUSEHOLD

FIREWOOD PESTS
By Mike Potter

This is the season when many homeowners begin to burn firewood. Firewood is a source of warmth and comfort, but can also be a way for pests to enter homes. Most pests living in firewood pose no harm to people, furniture, or to the structure. Nonetheless, homeowners often become concerned when insects emerge from wood that is brought indoors, and crawl or fly about the house.

Several types of pests dwell within firewood. Termites, wood boring beetles, and carpenter ants often tunnel and feed within the logs, but upon emergence, usually will not infest structural wood or furniture inside the home. Other kinds of pests hide or overwinter beneath the bark. Examples include centipedes, ground beetles, sowbugs, pillbugs, spiders, scorpions and wood cockroaches. Typically, these pests emerge within a few days or weeks of the wood being brought indoors. For the most part, they are harmless other than by their presence.

Preventing Firewood Pests

Control of firewood pests is best accomplished by management of the firewood itself. Spraying/dousing the wood with insecticides is not necessary, effective, nor recommended, and could produce harmful vapors when the wood is burned. A better plan is to:

1. Store firewood outdoors, only bringing in what you plan to burn immediately or within a few hours. Storing firewood for extended periods inside the home, garage or basement allows pests in the wood to emerge within the structure. Firewood stacked indoors can also become a harborage for rodents.

2. Position the woodpile away from the house and off the ground. Firewood stacked against the side of a building impedes ventilation and encourages moisture problems. Storing the wood in this manner also provides a direct, hidden avenue for termites and carpenter ants into the structure. Stacking firewood off the ground (e.g., on poles suspended between concrete blocks) increases air circulation and drying.

3. Burn older wood first. This shortens the time during which pest infestations can become established.

4. Shake or knock logs together to dislodge any pests clinging to loose bark. Don’t forget to check bottoms of log carriers, since pests often crawl into these when the logs are transported into the home. The occasional insect emerging from firewood can easily be eliminated using a broom or a vacuum.

PESTICIDE NEWS & VIEWS

PRISTINE®, A NEW FUNGICIDE FOR FRUIT CROPS DISEASE CONTROL
by John Hartman

Kentucky fruit growers are often faced with fighting serious diseases of fruit crops. This is especially true during wet growing seasons such as this year where Kentucky experienced the 2nd wettest April-September since weather data have been recorded. Although for the most part several fungicides are available for use against most fruit crop diseases, availability of additional effective fungicide tools are welcome to most fruit growers

Pristine fungicide, manufactured by the BASF Company, was recently registered for use on many fruit crops. Pristine 38WG is a combination of two fungicides, pyraclostrobin and boscalid. Pyraclostrobin is the active ingredient in the fungicide Cabrio and is similar in chemistry to other strobilurin fungicides registered for fruit disease control such as Abound, Sovran, and Flint. These fungicides are all reduced risk fungicides made from chemicals derived from a mushroom that grows on pine cones. Boscalid, an anilide fungicide, is the active ingredient in the fungicide Endura, an excellent powdery mildew control chemical. This combination of fungicidal compounds not only interferes with fungal cell respiration and production of energy, but it also deprives the fungal cell of its energy source and eliminates the availability of chemical building blocks for synthesis of essential cellular components. This pre-packaged mix of fungicides gives the fungicide Pristine broad-spectrum activity against many fruit diseases.

Pristine is registered for control of diseases important to Kentucky in the following crops:

• Grapes - Powdery mildew (Uncinula), cane and leaf spot (Phomopsis), anthracnose (Elsinoe), downy mildew (Plasmopara), black rot (Guignardia), bunch rot (Botrytis suppression only), and ripe rot (Colletotrichum). There is a pre-harvest waiting period of 14 days for grapes, and the product should
be used no more than 5 times in one season. This product should not be used on certain grape varieties including Concord, Fredonia, Warden, and grapes related to these types.

- Blackberries and raspberries - Anthracnose (*Elisnooe*), spur blight (*Didymella*, *Phoma*), leaf spots (*Septoria*), rust (*Arthuriomyces*, *Phragmidium*), powdery mildew (*Sphaerotheca*), and gray mold (*Botrytis*). There is a 0-day preharvest interval and the product should be used no more than 4 times per season.

- Blueberries - Anthracnose fruit rot (*Colletotrichum*), twig blight and canker (*Phomopsis*), rust (*Pucciniastrum*), mummy berry (*Monilinia*), powdery mildew (*Microsphaera*), gray mold (*Botrytis*). The preharvest waiting interval is 0 days and seasonal applications should be limited to 4.

- Strawberries - Anthracnose (*Colletotrichum*), gray mold (*Botrytis*), powdery mildew (*Sphaerotheca*), leaf spot (*Mycosphaerella*). For strawberries, the preharvest interval is 0 days. The fungicide should be used no more than 5 times during the growing season.

- Stone fruits - Pristine is cleared for use on all stone fruits and is labeled for control of brown rot blossom blight and fruit rot (*Monilinia*), cherry leaf spot (*Blumeriella*), peach scab (*Cladosporium*), powdery mildew (*Sphaerotheca*), and shot hole leaf spot (*Wilsonomyces*). The preharvest interval for plums, cherries, and peaches is 0 days and the fungicide should not be used more than 5 times per season.

- Nut trees such as pecans and walnuts. Pecan scab (*Cladosporium*), various foliar fungal diseases including anthracnose and shot hole leaf spot; shoot blight, fruit rot, and rust are also listed. The preharvest interval is 14 days and maximum seasonal fungicide use is 4.

Fungicide resistance management will still be important for Pristine fungicide. For most crops, no more than 2 consecutive applications are suggested before changing to a fungicide with a different mode of action. Fungicides having similar modes of action to pyraclostrobin such as Abound, Flint and Sovran would not be appropriate in the fungicide rotation. Pristine and other new fungicides will be listed in the 2004 Commercial Tree Fruit Spray Guide and the 2004 Commercial Small Fruit and Grape Spray Guide, available at Kentucky County Extension Offices early next year.

THE INDUSTRY TASK FORCE II ON 2,4-D
Press Release - September 25, 2003

TWO MORE INDEPENDENT STUDIES CONFIRM 2,4-D NOT A CANCER RISK
OTTAWA - Two studies recently published in peer-reviewed journals by researchers of the U.S. National Cancer Institute (NCI) reinforce the existing body of scientific evidence that the herbicide 2,4-D does not present a cancer risk to farmers and other pesticide applicators. The first study is a re-analysis of data from three earlier studies conducted in Kansas, Nebraska and Iowa-Minnesota during the 1980s and 1990s. The NCI researchers determined: “Whereas an indicated effect of 2,4-D exposure on NHL (non-Hodgkin’s lymphoma) was reported in the NCI’s Nebraska and Kansas studies, this analysis of the pooled data found no association with having ever used 2,4-D.”

NCI researchers also concluded: “Although epidemiological data on cancer risks from exposure to specific pesticides are scant, it also suggests that while some pesticides may present a cancer risk, many, maybe even most, pesticides do not.” The article by A.J. De Roos was published in the Journal of Occupational Environmental Medicine. The second report concerns NCI’s Agricultural Health Study of 55,332 male pesticide applicators. The researchers determined that the cancer incidence among farmers and applicators was significantly lower than the cancer incidence in the general population. Furthermore, the researchers found that there was no association between the use of 2,4-D and prostate cancer. The article by Michael C.R. Alavanja was published in the American Journal of Epidemiology (Am J Epidemiol 2003;157:800). This latest research by the National Cancer Institute is critically important because it reinforces earlier decisions of the World Health Organization, U.S. Environmental Protection Agency and the European Commission, stated Donald Page, Executive Director of the Task Force. “The overwhelming body of modern scientific evidence clearly demonstrates that the use of 2,4-D by farmers and other applicators does not present a cancer risk.”

About 2,4-D
Since being first registered in Canada in 1946, the herbicide 2,4-D has become the most widely used agricultural herbicide in this country and worldwide. It is used on many crops that are an important element of an individual’s diet such as wheat, barley, rice, soybeans, potatoes, and pome, stone and citrus fruits. It is also a component of herbicides used by lawn care professionals and homeowners to protect turf grass from weeds. Since 1986, more than a dozen government and expert panels, including the Canadian Centre for
Toxicology review conducted for the Ontario Ministry of the Environment, World Health Organization, European Commission, Harvard University School of Public Health, University of Michigan School of Public Health, have concluded that 2,4-D does not pose an unreasonable risk to human health or the environment when used according to label instructions.

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.