



KENTUCKY PEST NEWS

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**ANNOUNCEMENT
TOBACCO**

- Sanitizing float-trays with bleach
- WHEAT**
- Aphids and the winter thaw
- FRUIT CROPS**
- Sanitation for Fruit Disease Control

LIVESTOCK

- Winter louse control on cattle
 - Horse lice a winter problem, too
- HUMAN/PUBLIC HEALTH PESTS**
- Primetime for head lice
- DIAGNOSTIC LAB - HIGHLIGHTS**

ANNOUNCEMENTS

STATE LABEL APPROVED FOR TRACER INSECTICIDE ON TOBACCO

Tracer has received a state 24(c) Special Local Need Registration for control of tobacco budworms and tobacco hornworms. It is applied as a foliar spray when these pests are present in the field. Tracer is also effective against loopers (not a pest in Kentucky) but is not active against aphids or flea beetles. The use rates range from 1.4 to 2.9 ounces per acre. In most cases, 2 oz per acre should be the optimum rate. Applicators will need a copy of the 24(c) label when using the product on tobacco. State labels in Kentucky are valid for one calendar year. (Dow AgroSciences)

TOBACCO

SANITIZING FLOAT-TRAYS WITH BLEACH

William C. Nesmith

A diligent tray sanitation program is critical to reusing trays with the float production system. Although several different methods of sanitizing are employed in Kentucky, bleaching trays is the most widely used approach, especially for small growers.

Our studies have demonstrated that dipping

washed trays into a 10% chlorine bleach solution, followed immediately by enclosing the wet trays in a plastic chamber can give a high level of control against a wide range of plant pathogens. This method is usually not as effective as wet heat methods or properly conducted fumigation with methyl bromide. It is very time consuming and considerable labor is involved. The effectiveness of this system is highly variable from farm to farm, in part, because it is not being properly used in many cases. The aim of this article is to help growers obtain positive benefit from the bleaching-method of tray sanitation while avoiding crop damage or personal injury from this approach.

Consider the following points when using the bleach method of tray sanitizing:

- * The trays should be washed first - this removes a large number of pathogens.
- * Just dipping dirty trays in bleach solution and allowing them to dry is NOT highly beneficial.
- * Use only clean water to make the bleach solution.
- * Avoid highly alkaline water (before the bleach is added), because they do not work as well as water that is acid.
- * Make a 10% bleach solution (1 part bleach to 9 parts water, by volume).
- * Make new solution every 2 hrs or whenever it becomes dirty.

- * Organic matter and clays will remove the active ingredients quickly.
- * Insure complete coverage by dipping the tray into the solution several times and by turning the tray to insure both ends are treated with bleach.
- * Following dipping, immediately enclose the bleached trays under plastic or a tarp to keep them wet at least over-night or longer.
- * Without proper aeration and post-washes, bleach residues can cause serious problems, especially with older trays and those on the bottom of stacks that tend to soak-up more materials.
- * The bleach should be removed after the tray is sanitized to avoid plant damage.
- * Rinsing the trays with clean water or a solution of quaternary ammonium salts (Prevent, Greenshield, or Physan) is very helpful.
- * A week of aeration is usually adequate, except for trays that have soaked up large amounts of bleach.
- * To test bleached-trays before planting, and after the aeration period, rewet the tray with clean water and seal it inside a plastic bag overnight. There should be no odor of bleach!
- * Consider sanitizing trays immediately after use each season rather than holding contaminated trays.
- * Avoid recontamination of the trays between sanitizing and seeding.
- * Workers safety issues are very important with bleach. Read, understand, and follow the labels on the bleach container. Be sure to use quality rubber gloves, a face shield, and have an abundance of fresh air. Turn the trays while dipping rather than inserting the gloved hand into the solution.
- * Never add ammonia to bleach water so as to avoid very serious injury to the user.

WHEAT

APHIDS AND THE WINTER THAW

By Doug Johnson

We are at that time of year when the weather begins to give us those little hints of spring. The sun comes out and the temps move into the 50 - 60° F range instead of those bone chilling but insect killing 30 - 40° F range. It's a risk even to write these articles as the weather changes so fast.

However, these 'warm ups' always bring surprises to some producers. Even as we have been experiencing a very light aphid year, we now find large numbers of aphids in a few fields. Why is this and what should be done? Most often I do not have enough details to explain every situation but I can tell you the most common occurrences.

Generally, very large numbers of aphids at this time of year, especially AFTER a very cold period, are found in fields with considerably fall top growth. Large volume of fall top grow usually results from early planting and/or fall nitrogen fertilization. Early planting also allows for a LONGER and EARLIER period of aphid infestation, and a longer period of aphid reproduction. Additionally, the large amount of top growth provides protection for the aphid from the winter weather. So if you want large aphid populations then plant early and apply nitrogen in the fall. It will not always work but often does.

We believe that this past fall was not a good one for aphid flight. But, as always, there were some aphids about and I began to receive reports of small numbers just before Christmas. Whether or not fields with considerable top growth are more attractive to aphids than are fields with less growth is arguable. However, fields with a lot of top growth will allow for better survival of any aphids present, even late arriving ones, than fields that have less top growth. So, those would be the first fields to check.

Now the big question. *Assuming there are a lot of aphids this time of year, at least 10 per row foot, what should I do?* This depends upon what you know about the field. If you have been checking the fields and know that there were very few aphids up to this point and your plants are currently past Feeks GS 3, then I would suggest that you are very unlikely to benefit from insecticidal control, but it is possible. Occasionally, late winter early/spring aphid movement will allow for spread of BYDV.

However, whether the value of the yield reduction resulting from plants infected this late will pay for the application is, in my opinion, quite slim. If the aphids have been there all along and you are just now getting around to doing something, then don't waste your time. Any BYDV present will have already been moved about the field.

If you do not know what the aphid populations were during the fall, well then it's a crap shoot. If the aphids have been there all along, then any BYDV has already been moved through out the field and an insecticidal application is very unlikely to make any difference.

No doubt, the most important aphid control for relief from BYD comes in the first 30 days after plant emergence, followed closely by the second 30 days post emergence. Depending upon the season, you may still do some good with an application around Thanksgiving and even perhaps just before Christmas. BUT, the later these applications occur the less likely they are to make any real difference. Planting date still remains the most important management tool for avoiding aphids and thus BYD. If you feel the need to use nitrogen fertilizer in the fall, be very judicious in the use and remember you could be providing a home for aphids.

FRUIT CROPS

SANITATION FOR FRUIT DISEASE CONTROL

By John Hartman

Both commercial and backyard fruit growers are confronted with diseases that can limit the health and yields of their crops. Although use of resistant cultivars and supplementary fungicide sprays are helpful for disease management, sanitation is also needed. To achieve optimum fruit disease control, sanitary practices are essential.

The main effect of sanitation in the orchard or garden is to eliminate or reduce the amount of the pathogen or causal agent of the disease. Many disease-causing fungi and bacteria survive on twig and branch cankers, mummified fruit, and leaves on the ground. Managing the pathogen is accomplished by cultural practices such as pruning out and destroying diseased and dying twigs and branches, by raking up and destroying fruit mummies and infected fallen leaves, or by

removing diseased and dying plants.

In some cases sanitation involves removing and destroying an alternate host plant which harbors the disease. The classic example is the removal of red cedars and other susceptible junipers from areas near the orchard to stop the dissemination of cedar-apple and cedar-quince rust to apples. Whether eliminating an alternate host or cleaning up a fruit planting, growers who make the effort to learn how pathogens are surviving will be more successful in their disease management efforts.

An added benefit of using pruning for sanitation is that pruning or thinning out diseased stems or branches also allows free air circulation and improved sunlight penetration to reduce the wetness and humidity in the fruit crop. This reduction in the moist conditions needed for infection by fungi and bacteria will reduce the amount of disease that develops.

The dormant season is a good time for sanitation efforts. The following are some selected fruit diseases with specific sanitation procedures useful in disease control.

- Apple scab. The fungus overwinters on old leaves on the ground. Destroy all of last year's leaves by raking them up and destroying them.
- Apple fruit diseases. Fruit rot pathogens can be found on dried, shriveled fruits, called mummies. Most of the pathogens are also capable of residing in dead twigs and branches in the tree. Remove fruit mummies from the tree and destroy them and prune out and destroy dead wood and cankers.
- Apple and pear fire blight. The bacteria survive in branch and limb cankers in the tree. The dead wood associated with the cankers also harbors fruit rot fungi. Prune out and destroy fire blight cankers.
- Peach and plum brown rot. The decay fungus survives in mummified fruit. They should be removed and destroyed.
- Peach and plum cankers. The fungi survive in dead and cankered twigs and branches. Prune out and destroy cankers and dead wood.
- Plum and cherry black knot. The fungus survives in the swellings. Remove and destroy all knots before bud break. Prune a few inches below the swelling.
- Cherry leaf spot. Rake up and destroy last year's fallen leaves because they harbor the fungus.

- Grape black rot. The fungus lives in tiny, dried, shriveled fruit and in cane cankers. Pick off and destroy mummies still hanging on the vine and prune out and destroy diseased canes.
- Raspberry and blackberry anthracnose and cane cankers. Canker fungi reside in diseased stems of brambles. Remove and destroy diseased and winter-injured canes.
- Strawberry gray mold. The gray mold fungus colonizes and produces spores on dead leaves and petioles. If feasible, hand pick and destroy dead strawberry plant tissue.

If fungicide sprays are needed to supplement these sanitary practices, spray guides are available from county extension offices. Information for commercial growers can be found in publications ID-92, *Commercial Tree Fruit Spray Guide, 1999* and ID-94, *Kentucky Commercial Small Fruit and Grape Spray Guide, 1999* and for backyard fruit growers, publication ID-21, *Disease and Insect Control Programs for Home Grown Fruit in Kentucky Including Organic Alternatives*.

LIVESTOCK

WINTER LOUSE CONTROL ON CATTLE

By Lee Townsend

Animals that are rubbing themselves extensively against fences, trees, etc. may have lice. To confirm this, examine the animal in several places- neck, withers, brisket, shoulders, mid-back and tail head. Sucking lice, with very narrow heads, may congregate in dense patches that look like black to blue-brown spots the size of a quarter or 50-cent piece. A close look will show the individual lice and nits. These lice spend most of their time attached to the animal and sucking blood. They are slow to move around. Chewing lice are less likely to be found in clusters unless the infestation is very heavy. They are brownish yellow and have a wide, flat head. Biting lice are easily disturbed and can be very active.

Cattle grubs are still migrating through cattle at this time of year. This is an important consideration when selecting a louse control option for animals that were not treated this fall for cattle grubs or where the grub treatment history is unknown. In these cases, non- systemic pour-on insecticides with active ingredients such as permethrin (Atroban, Brute, DeLice, Expar, and Permethrin);

lambda-cyhalothrin (Saber); or cyfluthrin (CyLence) are good choices to reduce louse numbers in a herd. These products have little effect on nits or louse eggs glued to the hair. A second application, 2 to 3 weeks after the first, will kill newly-hatched lice. Read the label directions carefully before application. Dust bags, backrubbers, ear tags and other self-application devices tend to miss lower portions of the animals so infestations come back after a time.

HORSE LICE A WINTER PROBLEM, TOO

By Lee Townsend

Two species of chewing lice and one blood-sucking louse attack horses. Although different from the species which attack cattle, the peak winter problem and effects on the animals are essentially the same. An estimated 5% of pastured have noticeable louse infestations in the winter. Spread is primarily by animal to animal contact but lice can be moved on grooming brushes, blankets, and harnesses. Brushes, rope halters, and leather articles can be treated with very hot water to prevent transfer of lice. Wipe on insecticides containing the active ingredient permethrin are very effective against lice.

HUMAN/PUBLIC HEALTH PESTS

PRIMETIME FOR HEAD LICE

by Mike Potter

Most people associate winter with the end of their insect problems. In the case of head lice, nothing could be farther from the truth. Head lice are especially common this time of year, especially on children. Schools bring large numbers of children together in close, personal contact. Hats and coats are often shared or hung together in the same closet, permitting transfer of lice from one child to another. Transfer of head lice can also occur by using infested combs and brushes, or resting one's head on upholstered furniture or pillows recently used by an infested person.

Diagnosing the Problem- Head lice are bloodsucking insects that live exclusively on humans. They usually infest only the head, preferring the nape of the neck and the area behind the ears. The first indication of head lice is itching and scratching caused by the bloodsucking habits of the louse. Examination of the hair and scalp will usually

reveal the white or grayish crawling forms (about the size of a sesame seed) and yellowish white eggs (nits) attached to the hair shafts close to the scalp. The nits are sometimes mistaken for dandruff or residues of shampoo but will not wash off or be flicked off with a finger. Usually all life stages can be seen with the naked eye, although a flashlight and hand lens are helpful. Red bite marks or scratch marks are often seen on the scalp or neck.

People should be aware that there are many factors (other than lice) that may cause itching and irritation during the winter. Dry air alone can cause irritation, producing a condition known as "winter itch". As skin loses moisture, itching results. A skin moisturizer or home humidifier is often helpful in these situations. See ENT-50 *Invisible Itches: Insect and Non-Insect Causes*.

Elimination and Prevention- There are four key steps to eliminating head lice and preventing their return. Steps 1-3 should be performed at the same time in order to avoid reinfestation.

1. The child or infected person(s) should be treated with a pediculicide shampoo formulated specifically to control lice. Several different products, most containing permethrin or pyrethrins, are available through pharmacists and physicians. Follow the directions on the package. If one family member is found to be infested, all others should be examined. More than half of lice-infested children have another infested family member at home.

2. Remove all nits using a fine-tooth louse comb. Although this step can be quite time-consuming, nit removal is critical to eradication. Louse control shampoos often do not kill all the nits, and surviving eggs will hatch within 7 to 10 days, continuing the cycle of reinfestation. Dead nits also tend to remain attached to the hair, causing uncertainty about reinfestation. Nits are most easily removed by combing while the hair is slightly damp; adding conditioner may make combing easier. Nits can also be picked out with fingernails or cut out with small safety scissors.

3. All personal articles that have been in contact with the patients's head should be deloused. Normal laundering with hot, soapy water (125 degrees F for 10 minutes), or dry cleaning will kill lice and nits on pillowcases, sheets, night clothes, towels, hats, and stuffed animals. Combs and brushes should be soaked for 10 minutes in a pan of

very hot water.

Treatment of the premises or clothing with insecticides is generally not required or recommended for the control and prevention of head lice. This is because the lice cannot survive for more than a day or so off of their human host; nits lose viability within a week. As an added precaution, carpeting and furniture contacted by infested individuals may be vacuumed.

4. To reduce the chance of reinfestation, children should be instructed not to share hats, clothing or brushes with their classmates. Each child should have a separate storage space for their hats and other clothing at home and school to prevent contact with other garments. If this is not possible, coats should be hung on hooks so they do not touch, or on the backs of students' chairs.

Managing Persistent Infestations- Despite all the above efforts, there are times when a head lice infestation seems to persist indefinitely. Persistent infestation may be due to various causes, one of the most likely being improper use of the pediculicide (e.g. insufficient time shampoo left on the hair, or failure to reapply after 7 to 10 days). Other times, not enough time was spent combing out the nits or no effort was made to concurrently treat other infested family members.

In rare, but increasing instances, the product in use may have lost its effectiveness. Head lice resistance to pediculicides has been documented recently in certain areas of the world, especially to permethrin. Resistance to pyrethrin/piperonyl butoxide formulations appears to be less common. If resistance is suspected to the pediculicide you have been using, consult with your physician.

Elimination of a head lice outbreak in a school, nursing home, or similar shared facility requires prompt, coordinated action and administrative support to prevent the spread of lice to uninfected individuals. Unless all affected persons are treated, the condition will continue.

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DIAGNOSTIC LAB - HIGHLIGHTS

By Julie Beale

Although our sample load is light at this time of year, we have gotten recently several notable samples from greenhouses: tomatoes with both *Botrytis* gray mold and *Cladosporium* leaf mold and greenhouse-grown ornamentals with powdery mildew. All of these disease problems occur under extremely humid conditions. Improving air circulation to reduce humidity is crucial in managing these foliar diseases. Fungicide applications need to be used in combination with good cultural practices for maximum effectiveness.

We have also seen bacterial spot on potted primroses and *Cytospora* canker on pine and spruce in the landscape.

Note to agents: Now is a good time to check your supply of "Plant Disease Identification Forms". If your office is running low, e-mail Pat Yancey, Extension Secretary, to receive a supply of the three-part forms. Photocopy the supplemental "Tree and Shrub Forms" in your office and be sure

to include this form (as well as the 3-part form) with all woody samples.

Lee Townsend, Extension Entomologist

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