



KENTUCKY PEST NEWS

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ANNOUNCEMENTS

HOW TO GET THE LATEST VERSION OF ENTOMOLOGY FACT SHEETS

By Ric Bessin

As you may have noticed, camera-ready copies of new and revised Entomology fact sheets (Entfacts) are no longer sent to county offices in the weekly packets. Generally this had worked well for us, but there were a few problems. In the past, agents needed to keep up with a notebook in order to ensure that they had the latest version of the fact sheets. Additionally, the agents in the office had to share the single copy that was sent.

With the new system, camera-ready versions are available on the Department's web site. This web site will always have the latest version of each ENTFACT publication. County offices can retrieve ENTFACTS as needed and print them using an Acrobat Reader. There are 162 entomology fact sheets now available.

The WWW address for the Departmental home page is:
<http://www.uky.edu/Agriculture/Entomology/entfacts.htm>

Three new ENTFACTS are now available:
ENTFACT 122 Soil insects and idle land returning to production
ENTFACT 214 Green fruitworms
ENTFACT 506 How far can house flies fly?

CORRECTION- METHYL BROMIDE RATE

The correct rate of methyl bromide for use in tray sanitation is **3 lbs/1,000 cubic feet** rather than 1 lb/1,000 cubic yards as stated in the March 16, 1998 issue of Kentucky Pest News (#804).

ALFALFA

MANY ALFALFA FIELDS "DODGE A BULLET"

By Paul Vincelli and Paul Bachi

The arctic temperatures experienced statewide on the morning of March 12 were theoretically cold enough to freeze alfalfa regrowth right back to the crown. Across most of the state, official air temperatures during the morning of March 12 were in the low teens to single digits. This is well below the 24-26 °F that can freeze aboveground alfalfa tissues.

✓ **When spring regrowth is completely killed, two problems occur:**

1. It stresses the alfalfa. The first six inches of spring regrowth occur at the expense of crown reserves. Several consecutive “freeze-downs” can severely weaken alfalfa stands. This alone can be lethal, and it can create opportunities for the crown rot complex.

2. It substantially increases the risk of a Lepto leaf spot epidemic in the first cutting. The dead leaf and stem tissue can be quickly colonized by the Lepto leaf spot fungus. Once it has colonized this food base, the fungus sporulates heavily, creating conditions that lead to an epidemic if cool, wet weather prevails during growth of the first cutting.

Our observations on the current crop suggest that much of the alfalfa crop escaped serious freeze damage, which is surprising and certainly welcome news. With the mild conditions experienced this winter, alfalfa fields commonly had about 2-4 inches of growth by the morning of March 12. However, the freeze damage we have observed in Fayette and Caldwell Counties generally has been confined to the top 1-1.5 inches of growth on the tallest plants in the field. The two to three inches of growth closest to the soil were healthy. We are, however, receiving some reports of alfalfa fields in northern Kentucky which were completely frozen down to the soil line.

Weather records show that soil temperatures under a grass cover dipped down to the mid- to upper-30's°F for a night or two, and then climbed back up. Our analysis of the weather data and symptom distribution suggest that the soil, which had been warmed considerably prior to the cold snap, provided enough radiational heat to keep the aboveground alfalfa regrowth from freezing in many instances. Thus, many alfalfa fields appear to have thus “dodged a bullet” with the recent cold weather.

County Extension Agents should note that fields which did experience freeze-down down to the crown are at risk for the problems described above. For such fields, if serious cases of Lepto leaf spot develop, early harvest is highly recommended, even if it means risking rain damage to the hay. Also, be sure to maintain the recommended level of potash for general agronomic reasons as well as to maintain some resistance against the crown rot complex.

LEAFHOPPER RESISTANT VARIETIES

By Lee Townsend

There are now some alfalfa varieties on the market with resistance to the potato leafhopper. Plant characteristics associated with this resistance include pubescent leaves and stems, and erect glandular hairs. The actual mechanism of resistance is not known but some compounds that are toxic or repellent leafhoppers may be released from the glandular hairs.

“First generation” varieties tested by C. Laub, R. Youngman, and T. Kuhar at Virginia Tech in 1997 included Arrest (Novartis), DK 121HG (Dekalb), Pioneer 5347 LH, Clean Sweep 1000 (Agway), and Interceptor (Agripro). These were compared to Pioneer 5454, a variety without the glandular hairs. 1997 was the first year of a long-term study.

Potato leafhopper populations were extremely high there during the growing season. Leafhopper numbers exceeded thresholds twice in all plots and insecticide applications were made to all plots on June 19 and again on July 31. The researchers found high numbers of leafhoppers on all varieties during most of the season but there were fewer nymphs on the resistant varieties than on the susceptible by the end of July. There were no yield differences between the resistant and susceptible varieties on any of the three cuttings. However, there were some differences in crude protein content that may have been due to leafhopper feeding.

They concluded that these glandular-haired varieties are susceptible to potato leafhopper damage, at least in the first year of growth and they IPM scouting procedures and thresholds should still be used. “Second generation” resistant varieties are already coming along, it will be interesting to follow their development. In many cases, potato leafhoppers can be managed by sampling and timely harvest.

CORN

SELECTING A STRATEGY TO CONTROL CUTWORMS

By Ric Bessin

So, what strategy should you select to manage cutworms in particular fields?

This is not an easy question to answer. It depends upon the available resources- scouting services,

equipment for applying cutworm controls (insecticide boxes and sprayers), history of cutworm activity, and risk factors for the particular field. Monitoring for cutworms and the use of rescue treatments requires a dedicated effort. Many producers choose to do this themselves, while others use one of several scouting services to monitor activity. Those without access to scouting services and with other on- or off-farm commitments may choose not to monitor.

What is the potential for economic losses to cutworms in a particular field?

Incidence of cutworm activity is not completely random. Fields with certain characteristics have a greater potential for activity. Cutworm infestations are governed in large part by crop rotation, late planting, low-damp areas of the field that drain poorly, excessive fall and early season weed growth, and the tillage or amount of surface residue. Because of these factors, strategies for cutworm control need to be developed on a field by field basis. Corn planted into sod has a greater potential for cutworm and wireworm activity. Corn following soybeans or wheat and using reduced tillage is also at greater risk to cutworms.

While reduced tillage is encouraged for soil and energy conservation, fields using these practices tend to have higher levels of weeds and decaying organic matter. The increased crop residue and weediness of reduced tillage fields may place these at a higher risk for infestation than conventional tillage fields by encouraging cutworm egg-laying. However, controlling weeds after a cutworm population has become established forces cutworms to feed on the corn seedlings. Ideally, weed control should be initiated 10 to 14 days prior to planting to reduce cutworm levels.

In summary, I recommend that **fields with one or more of the risk factors listed above and a history of cutworm problems be managed with a monitor and treat strategy or a preventive treatment.**

Ideally, monitoring and the use of rescue treatments is always recommended as the primary cutworm management strategy in Kentucky, but in the absence of monitoring in fields that are at risk, producers should not leave cutworm management to chance and the fortunes of nature. Scouting and

treating if necessary, when done properly, is the most economically sound cutworm control strategy.

For descriptions of common cutworms and information on cutworm biology, see ENT-59, *Cutworm Management in Corn*. Cutworm monitoring methods and thresholds are also included in this publication. For a list of recommended insecticides, see ENT-16, *Insecticide Recommendations for Field Corn*.

The first black cutworm moth capture of the season occurred this weekend in Fayette county traps.

TOBACCO

BLUESTONE-LIME FOR TOBACCO PLANT BED

by William Nesmith

Bluestone-lime (bordeaux mixture) has been used since the 1880's and remains a valuable tool in plant disease and algae control in the traditional outdoor plant beds, when made and used correctly. But, it is not labeled for use in float beds or greenhouses. Several have requested the instructions for making and using bluestone-lime, which is the reason for this article. Some new county agents passing along the request made comments like this: I have never heard of the "stuff".

Serious crop damage can result if not made and applied correctly. The rates used in soil beds are too high for safe use in floats or greenhouses, even if it were labeled. In addition, it is very messy to handle, when compared to modern pesticides. At one time, bluestone-lime was the most widely used pesticide applied to tobacco plant beds in Kentucky, but these negatives along with other options lead to declined usage before containerized transplants replaced most traditional beds.

How to prepare Bordeaux mixture (Bluestone-Lime):

* First read and follow the label present on the bags of copper sulfate. All copper sulfates are NOT labeled for this use, even though they are the same active ingredient. The most common labeled formulation marketed in Ky is labeled by Diamond, while another common formulation marketed as Blue Viking by Griffin is not labeled for tobacco but has many horticultural and non-crop uses labeled. Below are the steps that we have long recommended from the University of Kentucky:

1. Fill a clean container that will safely hold 50 gallons of water with about 15 gallons of clean and strained water (mixing container); **2.** In a separate container, mix thoroughly 4 lbs of fresh hydrated lime into 4 gal of water; **3.** In a second, separate container, dissolve 3 lbs of bluestone in 4 gallons of water; **4.** This is the combining and neutralization step - Pour the lime paste into the mixing container of water (prepared in step 1) and stir vigorously, and while stirring add slowly the bluestone solution; **5.** Add additional clean, strained water to make the volume up to 50 gallons and stir well. This mixture is then added to the beds at the rate of 1 qt/sq yd of bed (using a sprinkle can or sprayer with good agitation during all steps in the application). The first application should be made when seedlings are first appearing and a second 10 days later.

✓ **Here are some additional points to avoid crop injury:**

Purchase and use FRESH hydrated lime, to insure appropriate neutralization of the copper sulfate.

Be sure the bluestone is dissolved well before adding it to the larger container.

Agitate the mixtures continuously while applying or dipping the material.

Do not apply to large plants, this basically is a soil treatment.

Clean all equipment immediately after use to avoid damage to pumps and nozzles.

SMALL GRAINS

SPECIAL LOCAL NEED (24C) REGISTRATION APPROVED FOR TILT FUNGICIDE

by Donald Hershman

On March 13, 1998, the Kentucky Department of Agriculture, Division of Pesticides, approved a Special Local Need (24C) application from Novartis for the use of Tilt 3.6E fungicide on wheat up to and including Feeke's growth stage 10.5 (full head emergence) for the control of leaf and glume blotch. Prior to this approval, Tilt had to be applied to wheat prior to complete flag leaf emergence (Feeke's 8). Research and experience in Kentucky (Table 1) indicated that this early period of application often did not provide acceptable control of late-season diseases, especially leaf and glume

blotch and leaf rust. The 24C label gives farmers the flexibility to use Tilt when it is most needed, usually during the period of crop head emergence. Of course, crop scouting may indicate that an application earlier than heading is needed, and the Tilt label still provides for such a use. Alternately, crop scouting may indicate that no fungicide application is warranted, and this expanded label helps in that regard also.

Under the federal label, Tilt often had to be applied to wheat before the full extent of the disease situation was known. This frequently resulted in unnecessary applications of Tilt, because yield-limiting levels of disease failed to develop. Farmers with high yield potential crops had little choice but to pursue this course of action since the crop needed to be protected, but later applications were prohibited. With the 24C Tilt label, farmers now have the opportunity to assess disease conditions much later into crop development and apply Tilt when required, but only when needed. This, in fact, is the most desirable use of any fungicide; protective strategies must sometimes be employed, but reactive fungicide use strategies are more desirable for both economic and environmental reasons.

The 24C label for Tilt was made possible because of new residue data which showed that an application of 4.0 fl oz/A of Tilt 3.6E, made up to Feeke's stage 10.5 and 40 or more days before harvest, did NOT result in illegal residues in harvested grain or grain fractions.

Label restrictions are as follows: 1) do not apply Tilt after Feeke's growth stage 10.5, 2) do not apply more than 4 fl. oz. of Tilt per acre per season, 3) do not apply within 40 days of harvest, 4) do not cut the green crop for hay or silage. After harvest, the straw from treated crops may be used for bedding purposes. **NOTE:** The user must have a copy of the 24C Label at the time of application.

Now that wheat producers have a new fungicide tool to manage late-season fungal diseases, they must still decide if and when to apply Tilt. This is an especially important question considering the recent freeze damage to so many wheat fields in Kentucky. Generally speaking, the lower the yield potential of a field, the less benefit will be realized

Table 1. The importance of proper timing of fungicide application under moderate disease pressure on Clark wheat - Caldwell County - 1993

Treatment	When applied	F	% leaf blotch+ F-1	% glume blotch +	% leaf rust (F)	% leaf Yield (bu/A)
Non-treated	—	4.5	33.3	15.7	4.1	61.0
Tilt 3.6E	Flag leaf emergence (Feeke's 8)	2.2	17.7*	9.6	2.4*	66.0
Tilt 3.6E	Heads emerging (10.3)	1.2*	8.3*	6.6*	0.4*	69.5*

+ *Stagonospora nodorum* leaf and glume blotch F= flag leaf; F-1 = second leaf from top *Significantly higher than non-treated values at P=0.05

by using a fungicide. There may be a point where the cost of controlling disease exceeds the yield benefit achieved. I cannot tell you for certain where that cut-off yield potential is, but many plant pathologists say it's around 50 bu/A. You will need to make that yield determination for your own specific situation.

Once you have established that a sufficient yield potential exists, crop scouting must be used to answer the remaining fungicide use questions. First, you must remember that wheat fungicide will only control certain diseases, specifically, powdery mildew, *Septoria tritici* leaf blotch, *Stagonospora nodorum* leaf and glume blotch, leaf rust, and tan spot. Other diseases will not be affected by fungicide use. If crop scouting indicates that one or more of the target diseases has reached threshold, then spraying may be appropriate. Exceptions may be where: 1) the variety is moderately resistant to the disease(s) in question, 2) weather conditions are predicted to turn hot and dry, or 3) other non-target diseases or conditions are threatening crop yield. If one or more of these situations exists, then you must use some good old common sense in deciding whether or not to spray. Also note that there is often a point in disease/crop development where waiting too late to spray can compromise the results. In other words, even though Tilt can be applied through complete head emergence, it is possible that maximum disease control will be achieved with an earlier application. The key is to use crop scouting and determining if a disease threshold has been reached. Consult UK Cooperative Extension Service Publication ID-125 "A Comprehensive Guide to Wheat Management in Kentucky" for a detailed description of crop scouting requirements and fungicide use thresholds.

ID-125 is available through your local County Extension office.

PROBABLE EFFECT OF THE RECENT FREEZE ON WHEAT DISEASES
by Donald Hershman

The recent freeze damage sustained by much of the wheat crop in Kentucky is a much-discussed topic at present. Over the next week or so, growers will decide to either keep their wheat crops or destroy the damaged fields and plant either corn or soybean. Numerous producers have asked me how the freeze might impact disease development should they decide to keep their crops.

The two points to consider are the effects of the freeze on the disease organisms and on crop development. First, let's consider the disease organisms. Those organisms that were systemic in plants prior to the freeze, or that were present in root and crown tissues, will probably be unaffected by the freeze. Consequently, diseases such as take-all, wheat soil-borne mosaic, wheat spindle streak mosaic, loose smut, and (in fall-infected fields) barley yellow dwarf, will not be affected by the freeze. Those organisms that were active in green tissue at the time of the freeze should be present at reduced levels. As a result, we should see less incidence of leaf rust and powdery mildew. The fungi that causes these diseases are obligate parasites and once active in green leaf tissue, the fungi will die if the leaf is killed. Even if the leaves do not die outright, the fungi can be frozen out and their levels reduced significantly. This situation happened in 1990; the region was braced for a leaf rust epidemic, but the epidemic never occurred because of an April freeze which greatly lowered

populations of the rust fungus. That same year, powdery mildew levels were also lower than expected. That situation was also attributed to the April freeze. Similarly, post-freeze transmission of barley yellow dwarf virus by aphids may be reduced because of a reduction in aphid populations. Other disease organisms, such as those that cause speckled leaf blotch (*Septoria tritici*), *Stagonospora nodorum* leaf blotch and tan spot may be initially reduced by the freeze, but their levels should rebound as the season progresses. The leaf blotch fungi, in particular, may actually be worse than normal because they can colonize dead and injured leaf tissue readily. The same is true for the bacterium that causes bacterial leaf streak and black chaff. Finally, organisms that were dormant at the time of the freeze, such as the fungus that causes head scab, will probably be little affected by the freezing temperatures. So, in the end, the effect of freezing conditions on disease organisms is a “mixed bag”.

Major effects of freezing temperatures on crop development is to thin stands and delay crop maturity. The former condition will help keep fungal populations down because of increased air circulation and light penetration into the crop’s canopy. Of course, thinner stands also mean less yield, so that is not much help. The latter condition, delayed maturity, will likely increase the prevalence of late-season fungal diseases. This is due to the fact that wheat will be maturing during warmer and, possibly, wetter weather. Warm, wet weather favors development of head scab, late-season leaf and glume blotch, tan spot, leaf rust and black chaff. We may see increased levels of some or all of those diseases except, perhaps, leaf rust which will probably be at reduced levels as described above. In addition, late-maturing crops will be stressed and this might encourage additional damage by diseases such as take-all and barley yellow dwarf, among others.

Bottom line, I wouldn’t base my decision to keep or destroy my wheat crop according to how the freeze might alter the disease situation. However, if you should decide to keep your crop, this article has, hopefully, brought to your attention several “red flags” that bear watching.

INSECT MANAGEMENT ON FREEZE DAMAGED WHEAT FIELDS

By Doug Johnson

Producers are faced with a great many questions when trying to decide whether or not to continue with their freeze-damaged wheat. These are not easy questions to answer, and no matter what the decision, there will be impacts on future insect problems. Here are some things to consider:

Normal Wheat - Continue your scouting program for cereal leaf beetle and armyworm. Expect both to appear a bit earlier than normal. Early detection and identification is the key; both easy to control if the need is there.

Keeping Damaged Wheat. — Damaged wheat will be somewhat delayed in development and maturity, ranging from 3-4 days to two weeks. Long delays will put the crop at additional risk from cereal leaf beetles and armyworms damage are possible. Again the key is to keep your eyes open.

Planting of double-crop soybeans also will be delayed. Depending upon the varieties you choose, this could move maturity dates later into the season placing the bean crop at additional risk. The greatest potential problem will be late season pests, especially if the bean canopy does not close. All soybean insects could be a problem but the green cloverworm and podworm (=corn earworm) could be very important.

Abandoning Wheat for Corn — Your biggest threat will be from grass-loving insects, especially if you no-till into standing green wheat. If possible, kill the wheat well before planting. Armyworms, cutworms and cereal leaf beetles will be attracted into the wheat even if you don’t think it looks very good. If you apply the herbicides at or just after planting, all the insects in the field will abandon the dying grass for the new green corn!

Change to Soybean -- Changing to soybeans at the normal time for planting full season beans should present few problems, but get you weed control underway well before planting if at all possible. Most wheat-corn insects will not find soybeans very tasty but don’t take chances.

FRUITS

TREE FRUIT DISEASE MONITORING AND PREVENTION MEASURES

by John Hartman

Apple fire blight. Growers and County Extension Agents who are running the MARYBLYT computer program need to begin taking high and low temperature and rainfall measurements now. Most apples are at the stage of silver tip (bud swell) to green tip (first green tissue emerging from the bud). The computer program is normally initiated at silver tip; if you are a little late, don't worry - the recent cold weather has reset the degree day accumulations for the causal bacteria in any case. Enter apple growth stage, high and low temperatures and rainfall into the computer program daily. Keep close watch on the results especially just before and during bloom; enter weather forecasts as needed to determine when to spray.

Apple scab. In some orchards, scab disease pressure last year was severe. If growers had significant scab in their orchards last year, they should use a protectant or a protectant/curative fungicide program beginning at 1/4 - 1/2 inch green tip. See page 10 and 11 of the "1998 Commercial Tree Fruit Spray Guide" (ID-92) for details. Other growers may be using the curative-only program which is based on leaf wetness and temperature measurements in the orchard, or the New York IPM Program, which makes use of four timed sprays of a curative fungicide beginning at the tight cluster stage of growth. These programs are also explained in the guide, but they should not be used if there was scab in the orchard last year.

Peach and plum brown rot blossom blight. The brown rot fungus may attack peach and plum flowers now and build inoculum for fruit rot disease later. There are many fungicides and combinations of fungicides that will provide excellent control of blossom blight, but the fungicides need to be applied now, during pink bud and bloom.

Plum black knot. Fungicides applied for brown rot blossom blight will also provide some protection against black knot. All black knots must be pruned out of the trees before bloom or the fungicide sprays will be wasted.

VEGETABLES

BT SWEET CORN RECEIVES EPA APPROVAL

By Ric Bessin

Sweet corn has been added to the expanding list of crops that express Bt for insect protection. Rogers Brand (Novartis) was granted approval for their Attribute sweet corn that contains the YieldGard gene. However, seed for Attribute sweet corn hybrid, GS0966 (a yellow shrunken hybrid) that Rogers Brand is marketing in 1998 is very limited.

Bt sweet corn containing the YieldGard technology enables sweet corn producers to greatly reduce the number of insecticide sprays used during production. This technology provides very good control of European corn borer and corn earworm and average control of fall armyworm. In Kentucky, European corn borer and corn earworm are consistent pests of sweet corn while fall armyworm is an occasional pest.

Does this eliminate the need for producers to monitor their sweet corn for insects? No. There are several insect pest that still need to be monitored and controlled if necessary. Flea beetles and cutworms are not controlled adequately by this technology, so producers need to scout these fields when plants are small. While Bt sweet corn protects itself against insects that attack the ear, producers are still advised to monitor for pests during this time period.

HOUSEHOLD

TERMITE CONTROL: STRAIGHT ANSWERS TO TOUGH QUESTIONS

by Mike Potter

March marks the beginning of termite swarm season in Kentucky and concerned homeowners will be seeking practical advice on what to do about their termite problem.

Q: Why are there so many termite calls during March - May?

A: Spring is typically when large numbers of winged termites, known as "swarmers," emerge inside structures. In nature, termites swarm in order to disperse and start new colonies. Very few swarmers emerging outdoors survive to initiate new colonies. *Termite swarmers emerging inside a structure almost never survive* -- but indicate an infestation is present. Swarmers and their shed

wings can be removed with a vacuum cleaner.

Q: How will I know if my home is infested?

A: The presence of winged termites inside a home almost always indicates an infestation warranting treatment. Termite swarmers are attracted to light and often will be seen around windows, doors and light fixtures. *Swarmers emerging from tree stumps, woodpiles, railroad ties and other outdoor locations are not necessarily cause for concern, and do not necessarily mean that the structure, itself, is infested.* Another obvious indicator of a termite problem is pencil-wide mud foraging tubes extending over foundation walls, support piers, sill plates, floor joists, headers and subfloors.

Q: Can I treat the house myself?

A: Termite treatment is usually a job for professionals.

Q: How do I choose a pest control firm? Why is there such a difference in price?

A: The company should be licensed by the Kentucky Department of Agriculture. Membership in the Kentucky Pest Control Association and/or National Pest Control Association suggest that the company is an established firm with access to technical and training information needed to do the job correctly. As with any service company, references are invaluable. Consider calling at least 2-3 companies. Requesting inspections and estimates from more than one company will substantiate the extent of your termite problem and allow you to compare services.

Take your time when selecting a termite control company. Termites damage wood slowly enough that the amount of damage caused by an additional day, week or month of continued activity is seldom significant. Avoid firms that try to pressure you into signing a contract immediately with “specials” or scare tactics.

Q: Does my entire house need to be treated... or can I just pay for a "spot treatment" in areas where I see termites?

A: Subterranean termite colonies can be very large; a single colony may contain a million or more individuals. The termite colony or colonies responsible for damage may actually be in a neighbor's yard, rather than beneath the house which is infested so localized or “spot” treatments are generally a gamble, except in cases of retreatment.

Q: How long will the treatment last? Which brand of termiticide is most effective?

A: Studies suggest that all registered termiticides should control termites for at least five years, if they are applied at label concentrations and rates. The *actual* length of control on a given structure will depend on such factors as thoroughness of the application, prevailing environmental conditions, and density of termites in the area. More important than the brand of termiticide, is that the treatment be performed by an experienced technician, backed by a responsible pest control firm.

Q: Isn't there a new termite control procedure utilizing baits?

A: A growing number of companies have begun using termite baits as an alternative to conventional liquid (barrier) treatments. The baits consist of paper, cardboard, or other “termite-friendly” food, combined with a slow-acting substance lethal to termites. Some bait products are installed below ground out in the yard, whereas others are placed within the structure in the vicinity of active termite mud tubes. Foraging termites consume the bait and share it with their nest mates, resulting in a gradual decline in termite numbers. On some properties, baits may constitute the only form of treatment; on others, they may be supplemented with either a partial or complete liquid application to the soil.

Termite baiting is a very complex subject. See *ENT-65: Termite Baits: A Guide for Homeowners* for more information.

DIAGNOSTIC LAB - HIGHLIGHTS
by Julie Beale and Paul Bachi

Recently, we have seen a number of samples of **greenhouse ornamentals and vegetable transplants** with apparent **chemical damage**--from herbicides, growth regulators, etc. Remind growers to follow label directions carefully when using chemicals in and around greenhouses. Some pesticides are labeled only for outdoor use and are restricted from use in greenhouses. Some chemicals applied outside the greenhouse may volatilize and damage plants as they are being moved between houses.

Other diagnoses from last week include: **Hypoxyton canker on beech, white pine decline,** and an unusually early case of **anthracnose on annual bluegrass.**

