

Fruit Pest News

Volume 9, No. 17 October 8, 2008

An online newsletter whose goal is to provide all interested persons with timely information on diseases and insects of commercial fruit and vegetable crops in Tennessee.

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1. Diagnosing Early-Season Problems in Plasticulture Strawberries

Dry weather, reduced methyl bromide availability, anthracnose crown rot infestation of transplants - several issues have converged on the strawberry industry for the 2008 planting season. All of Tennessee's strawberries should be planted by now, and any of these factors can result in the poor performance of newly-planted fields. If you see necrotic leaf tissue, there are some steps you can take to determine the cause.

The persistent lack of rainfall may have caused the accumulation of fertilizer salts even if recommended amounts of fertilizer have been used. Salts injury can be recognized by a burning of the leaves that begins at the leaf margins (Fig. 1). The pictured plant was taken from a field with a salts level of 4.1 mmohs/cm, versus an ideal range of 0.7 to 1.4 mmohs/cm. Where salts injury occurs, discontinue use of fertilizer and run pure water through the drip to leach the salts. Monitor the salts level in the soil with a salts meter such as a Dist 4, and resume fertigation when the salts level returns to the desired range.

The crown of plants with necrotic leaves should be sliced and checked for discoloration. Anthracnose crown rot, caused by *Colletotrichum gloeosporioides* ("the Glo," as it is often called) appeared in several fields last year as a result of nursery infestation. This disease is characterized by a reddish brown color of part of the crown interior (Fig. 2). At times, the discolored area can resemble the dull brown discoloration of *Phytophthora* crown rot (Fig. 3), and the two can be confused. The Glo can be confirmed by placing some cut crowns in a plastic container with a moist paper towel for a few days and looking for salmon-colored spore masses. In some cases, the Glo will cause small, black lesions to form on upper surfaces of leaves in the field, but not on the bottom, as with other leaf spots.



Figure 1. Salts injury 3 weeks after planting.



Figure 2. Crown anthracnose.



Figure 3. Phytophthora crown rot

For diagnostic assistance, ask your county Extension agent for help with submitting a sample or a digital image to the plant diagnostic lab at Nashville. A photograph may be all it takes to get your diagnosis before the day is done! (SB)

Caterpillar Pests on Fall Cole Crops

The warm September has kept insects active. While we are now experiencing some cooler night temperatures, pest moths and butterflies will still be laying eggs on cole crops. Moths have the ability to detect plant volatiles so they can find host plants on which to lay their eggs. Several weeks ago I was at the Middle Tennessee Research and Education Center checking a collards test plot. White day flying butterflies (imported cabbageworm) were landing on or near the tiny emerging collard plants. I do not think that the butterflies were laying eggs on these tiny plants but they will soon enough. Careful scouting on a regular basis will allow for detection of eggs and larvae.

There is a whole complex of cole crop caterpillars such as diamondback moth, cabbage looper, imported cabbageworm, cross-striped cabbageworm, and cabbage webworm. There are several new insecticides available for control of these caterpillar pests. Synapse, Coragen, and Radiant were added for control of cabbage looper, imported cabbageworm, corn earworm, cross-striped cabbageworm, and armyworm in the 2009 Southeastern U.S. Vegetable Crop Handbook on broccoli, Brussel sprout, cabbage and cauliflower. Synapse and Coragen were added for control of diamondback moth and Intrepid and Auvant were added for control of cabbage webworm. (FH)

Reminder for New Pythium Control in Greenhouse Tomato

As mentioned in the May 28 issue of this newsletter, Tennessee now has a 24(c), SLN label for Terramaster 4EC fungicide for control of Pythium and Phytophthora root rot in greenhouse tomatoes. Terramaster can only be used after transplanting; it cannot be used on seedlings. If you need a fungicide on seedling tomatoes, you must use Previcur Flex. The method of application of Terramaster on greenhouse tomatoes is through drip irrigation. The following is from the SLN label:

Apply Terramaster 4EC in a 0.01% solution (6.5 fluid oz. in 500 gallons of water) no sooner than 3 weeks after transplanting, using a volume of 6 - 8 fl. oz. per plant. Reapply as needed, but no sooner than 3 weeks after a previous application. Do not exceed 4 applications of Terramaster 4EC per crop. Do not apply within 3 days of harvest. Uniform distribution of Terramaster 4EC through the growing medium is essential for best results. Localized over-dosing may cause crop damage and under-dosing may cause ineffective disease control. Terramaster 4EC should be introduced into the growing medium only after the medium has been thoroughly irrigated to ensure adequate product movement through the growing medium. Continue irrigation until the entire desired quantity of Terramaster 4EC has been introduced. Do not mix Terramaster 4EC with other pesticides or fertilizers unless compatibility tests have shown complete compatibility. (SB)



Figure 4. Terramaster cannot be used before 3 weeks after transplanting in the greenhouse.

The Fruit Pest News URL is: <http://web.utk.edu/~extepp/fpn/fpn.htm>

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