Vermont Vegetable and Berry News – June 25, 2008

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NEWS FROM THE UVM PLANT DIAGNOSTIC CLINIC

(Ann Hazelrigg)

Early season problems in greenhouses were at a minimum this year with some edema (plant takes up too much moisture during cloudy cool weather and can't get transpire it so corky lesions form on leaf undersides) on ornamental bedding plants. Also saw some tomatoes with cold temperature injury and slow growth due to low temps in greenhouses early on. We had one sample of downy mildew on the leaf undersides on bedding plants (coleus) that had come in with the problem from an out of state shipment.

Downy mildew has been diagnosed in Southern Ontario on cucumbers. This disease does not overwinter in Vermont but blows in on storm fronts from the south. We have had perfect weather for this disease (cool and cloudy with lots of storm fronts) so be sure to be ready for this destructive disease by scouting and protecting your susceptible cukes with protectant fungicides. Symptoms include yellow spots on the upper surface of leaves that eventually turn brown and die. Entire leaves may also die if the disease is not controlled. In young lesions, a downy, sparse growth may be observed on the lower side of the lesion under dewy, foggy or humid conditions. To check movement of the disease go to the Cucurbit Downy Mildew Forecast website www.ces.ncsu.edu/depts/pp/cucurbit/ operated by North Carolina State University. If you suspect the disease, send a sample to the Plant Diagnostic Clinic at 105 Carrigan Drive, UVM, Burlington, VT 05405.

I have not seen any tomato bacterial canker this season but scout now for wilting plants as fruit loads ripen in greenhouses. I have rapid assay kits in the Clinic so can test plants and get you a quick answer for a positive infection. After all the rains this past couple of weeks, I suspect we will start to see all sorts of foliar disease problems showing up!

SCOUT YOUR SWEET CORN FOR CORN BORER

(from John Mishanec's Cornell Extension IPM report)

Go out and scout your sweet corn that is in late whorl stage. Stop at 10 random locations, as this will give you a truer picture of what is happening in the field than just looking for damage. At each location, inspect five plants for European Corn Borer damage. You are looking for small holes in the leaves at the top of the plant, especially around the covered up tassel. If you open up a plant that has not tasseled but has the holes, you will find the ECB larvae in the flowers of the tassel. Keep a running count of how many you find. Once you've looked at 50 plants total from 10 different locations just multiply the number of infested plants by two and you have the percentage of ECB in the field. If you are over 15%, than a control is called for when the corn comes into tassel.

Timing is very important. I looked at a field where the grower had sprayed too early and it did not control the ECB. You have to wait till the tassel is open but still pointing vertical. When the tassels are horizontal, it is too late. Put your first spray on when you see around 30 to 40% of the field in early tassel. Wait 4 to 5 days for the rest of the field to come into tassel and make your second application. This will do a good job controlling the ECB larvae. It is the only time to get the job done. Otherwise, the larvae will bore into the stem and be impossible to control. Remember, spike tassel is too early and full tassel is too late. You need to time it just right. When the tassels are still vertical but separated from each other, that is perfect. So look at your fields and keep track of when they are coming into tassel. Morning, before dawn is the best time to make an application as the ECB will be out and you are avoiding honey bees.

There are many materials labeled for ECB in corn, and these are listed in the New England Vegetable Management Guide, on line at: www.nevegetable.org. Organic growers can use an approved B.t. product (ensure good coverage and use a spreader sticker) or spinosad (Entrust).

BE ON THE LOOKOUT FOR PHYTOPHTHORA BLIGHT
(adapted from LI vegetable news)

Frequent rains have provided favorable conditions for development of this disease which can affect pepper, pumpkins and squash, as well as cucumbers, tomato, eggplant and beans. The problem often starts in low spots or areas with poor drainage, as the pathogen requires saturated soil to spread. Scout regularly for symptoms, which include irreversible wilting. Often a number of plants in a row or in a roughly circular pattern in the field will show these symptoms at the same time. Rogue out affected plants promptly. Cut plastic mulch to separate affected and healthy-appearing plants. The pathogen can move in water films on the lower surface of mulch. When soil conditions permit, subsoil in alleys to improve drainage. Consider use of raised beds and tolerant varieties in future. Be sure to rotate out of susceptible crops next year.

ASIATIC GARDEN BEETLES AND CHAFERS ARRIVE

Some locations in Vermont are experiencing high populations of these beetles. Asiatic garden beetle adults can attack many different vegetable, herb, fruit and ornamental plants. The adult is a small chestnut-brown, velvety, sometimes almost iridescent, scarab beetle about a half inch long, the size and shape of a coffee bean. They feed mostly at night by chewing irregular holes in the blossoms and foliage; damage is especially prevalent around the leaf margins. Adult rose chafers feed on grapes, fruit trees, roses, raspberries, and many flowering plants. Leaves are often left skeletonized with just the veins left behind. This 3/4-inch long beetle is spindlylegged, long, slender, tan to gray in color with reddish-brown head and thorax and a black undersurface

Damage can be prevented by covering plants with spun-bonded row covers and completely sealing the edges. Insecticides containing carbaryl (Sevin), or permethrin can be applied if necessary. These are also toxic to bees and beneficial, so apply with care.

Organic growers can use pyrethrin (Pyganic) and/or neem (AzaDirect). When there are high populations, insecticides may need to be re-applied every 3 to 4 days and even that may only provide partial control.

SLUGS IN STRAWBERRIES
(adapted from David Handley's UMaine IPM report)

Slugs usually feed at night, leaving large holes and tunnels in ripening fruit. Metaldehyde baits or sprays such as Deadline may offer some control of slugs, but the toxicict of this material is a concern near harvest time, especially in pick-your-own fields. Another product, Sluggo, is available for controlling slugs. This is a relatively non-toxic material containing iron phosphate plus wheat-based bait product. It is applied to soil as pellet, and the bait attracts snails and slugs. When eaten, the iron phosphate interferes with calcium metabolism in their gut, causing the snails and slugs to stop eating almost immediately and die three to six days later. It's available from Bioscape 877-246-227 or www.bioscape.com. One study I read from CA showed that 10 lb of Sluggo per acre was as effective as the more toxic metaldehyde at 20 lb per acre.

STRIPED CUCUMBER BEETLES
(adapted from Eric Sideman's MOFGA Pest Report)

Striped cucumber beetles are becoming active around the state and are destroying unprotected cucurbit seedlings. The adult feeding on the cotyledons and young leaves of seedlings is the worst damage. An additional risk with this pest is that the adults carry bacterial wilt and the only management of that disease is the control of the cucumber beetle.

The first line of defense is crop rotation. Adults spend the winter in crop debris and near the old field of cucurbits. Planting cucurbits over in the same field assures an infestation year after year. The cucumber beetle is a fairly good flier, and there is more than one generation per year, but the biggest problem is the early feeding by the overwintering adults and if you can confuse them by moving to a new field each year you may be able to get by. Transplants can tolerate beetle feeding much more than tiny plants from direct seeding. Newly germinating plants are easily killed by an attack nearly as quickly as they break the soil surface.

Protecting small plants from damage by covering with floating row covers as soon as you set out transplants or direct seed. Be sure to completely seal all edges of the cover. Remove the covers at flowering to allow pollination. The kaolin clay product Surround offers some protection. Spaying this white film onto the seedlings as soon as you put them out deters beetle feeding. It's easier to spray trays of small transplants with Surround before you set them in the field. Again, check the Vegetable Guide for insecticide options. Those available for organic growers include pyrethrin (Pyganic), and spinosad (Entrust). Pyrethrin is primarily a contact toxin, while spinosad acts both as a contact and a stomach poison. But, none of these provides a highly effective 'knockdown" of beetle populations.

Still if the beetles have already gotten out of hand and you need to do something they will help. An early morning spray with either of the materials above and then a spray with Surround to deter the beetle's return may be your best bet. No rotenone products are approved for organic production at this time.

Mention of pesticides is for information purposes only; no endorsement is intended nor is discrimination against products not mentioned. Always read and follow the label.