



Greenhouse TPM/IPM Weekly Report
University of Maryland Cooperative Extension
Central Maryland Research and Education Center

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Vegetable Transplants

Usually when the economy goes into a recession, people suddenly get interested in vegetable gardens. Several garden centers are telling us that people appear to be more interested in planting vegetables and the demand for transplants is good this year. They are relatively easy to grow and you can get quick turns on the bench.

One question that always seems to come up is how do you keep vegetable transplants such as tomatoes and peppers short and compact? Tomatoes grow most quickly when they are warm, wet, and well fed. To restrict tall spindly growth grow the plants cool, dry, and hungry- or combine cool days with warm nights. Peppers can also be grown hungry, but keep them 2 – 3 degrees warmer than the tomatoes.

When you fertilize try to use a 15-0-15 cal-mag type of fertilizer at 75- 100 ppm million. You can alternate with a 20-10-20 at 75- 100 ppm to fill the plant in and push growth. A soft pinch on tomatoes or peppers will help to keep the height under control, but adds about 2 weeks to the production time. Another method that has been used to help suppress height is to drag a rough cloth over the foliage of tomatoes or peppers to slightly wound the plant cells.



There are no Plant Growth Regulators (PGRs) labeled for edible transplant vegetables. PGRs can only be used on ornamental pepper plants, not on those consumed.

If you are growing ornamental peppers, here are some growth regulators that can be used:

- Same as tomatoes, taller cultivars can be soft pinched 6-8 weeks after sowing. Pinching results in bushier plants, but may increase the crop time by 2 weeks.
- Sumagic foliar sprays can be applied around 8-10 weeks after sowing at the rate of 10-15 ppm for taller cultivars or 5-10 ppm for medium-sized cultivars.
- Bonzi also controls plant height of ornamental peppers. Researchers at NC State University found that a Bonzi foliar spray at 20 ppm was comparable to Sumagic at 10 ppm on 'Pretty Purple' pepper. Bonzi also had the advantage of not reducing the number of fruits on each plant, while the use of Sumagic resulted in a 36 % decrease in the fruit production.
- B-Nine at 2,500 ppm can also be used for medium-sized cultivars.

Scouting Reports

Mites

We are seeing a lot of spider mite activity this week on pothos hanging baskets, pineapple sage, and variegated marjoram. John Speaker is also finding mites on vinca vine and annual vinca. Monitor on the undersides of the foliage and look for stippling damage.

Controls include: Akari (fenpyroximate), Avid (abamectin), Floramite (bifenazate), Pylon (chlorfenapyr), Judo (spiromesifen), horticultural oil, and Sanmite (pyridaben)



Twospotted spider mites with eggs

Aphids

We are seeing aphids on chrysanthemums and ‘Margarite’ sweet potato vines this week. Green peach aphids are showing up on cineraria. Oleander aphids are being reported on mandevilla. Look for cast skins, honeydew, and sooty mold on the foliage.

Controls include: TriStar (actemiprid), Marathon, (imidacloprid), Endeavour (pymetrozine), Orthene (acephate), Safari (dinotefuran), Azatin (azadirachtin), BotaniGard (*Beauveria bassiana*), Talstar (bifenthrin), and Astro (permethrin)



Oleander aphid on mandevilla



Green peach aphids on cineraria

Tospovirus

John Speaker detected symptoms of Impatiens Necrotic Spot Virus (INSV) on garden impatiens this week. He used on-site testing kits and submitted samples to the Plant Diagnostic Clinic to backup his findings. Plant Pathologist Karen Rane confirmed that the impatiens were indeed infected with INSV. If you see this show up in your greenhouse, immediately rogue out the infested plants. If virus transmission is going on in the greenhouse, the tolerance level for thrips drops to almost zero. Rotate between materials.

Controls include: Conserve (spinosad), Pedestal (novaluron), Mesurol (methiocarb), Talstar (bifenthrin), Azatin (azadirachtin), and Orthene (acephate)



Impatiens necrotic spot virus

Soft Scale

We received an interesting scale sample on *Costus scaber* (ginger) from an interiorscape site this week. John Davidson identified it as red wax scale, *Ceroplastes rubens*. Adult females have pinkish-red waxy covers with two pairs of white bands. This scale is reported to be an economic pest of citrus crops.

Controls include: Distance (pyriproxyfen), insecticidal soap, Talstar (bifenthrin), Orthene (acephate), Safari (dinotefuran), Marathon (imidacloprid), and horticultural oil



Red wax scale

Phytophthora

The dieback symptoms on the rosemary plants below were caused by *Phytophthora* crown and root rot. A good diagnostic clue that this problem is due to *Phytophthora*, and not to some other root rot fungus, is the dark brown discoloration of the lower stem. This is visible when the outer bark is scraped off. Like *Pythium*, *Phytophthora* is a “water mold” favored by poorly draining potting mixes and overwatering. The pathogen produces swimming zoospores that can move from pot-to-pot through irrigation water that drains from infected plants. Discard symptomatic plants promptly to reduce the chances of pot-to-pot spread.

Controls include: Subdue Maxx, Aliette, Terrazole, Stature, Truban, Alude, Heritage, Banrot, Camelot, and Compass

Photos by Karen Rane



Wilting and dieback



Discoloration of stem tissue

Upcoming Programs

Procrastinators' Pesticide Recertification Conference

June 6, 2008

Montgomery College, Germantown

For more information contact: Chuck Schuster at 301-590-2807 or cfs@umd.edu

IPM for Nurseries and Landscapes

June 11, 2008

Allegheny College of Maryland, Cumberland

For more information contact: Derrick Bender at 301-724-3320 or dbender@umd.edu

Procrastinators' Pesticide Recertification Conference- Eastern Shore

June 13, 2008

Wye Research and Education Center, Queenstown

For more information contact: Ginny Rosenkranz at 410-749-6141 or rosnkrnz@umd.edu