



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

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INSV in Greenhouses This Week

The Plant Diagnostic Lab confirmed Impatiens Necrotic Spot Virus (INSV) on garden impatiens, snapdragon and non-stop begonias this week. Monitor susceptible plants closely for virus symptoms and thrips populations.



Photo of symptoms INSV on snapdragon by Karen Rane

Wild Weather

It has been cooler than normal this spring. On April 7th there was 0.5 inch of snow in northern Baltimore County and Western Maryland had up to 1" of snow. Even with this cooler weather garden centers are reporting that sales are ok – but not great. Pansy crops appear to have sold out in most greenhouses at this point. This is good news. Easter lily sales appear to be alright so far but not phenomenal by any means. We received reports of aphids being very active in greenhouses in early April but then the cold weather blew back in and the aphid activity was reduced. Don't worry the aphids are still there and with the next big temperature upswing we should see lots of activity from this group of insects. Monitor aphid susceptible plants closely.

New Guinea Impatiens

John Speaker, Speaker's Garden LLC, brought in samples of New Guinea impatiens with the new growth being deformed, hardened, twisted and generally stunted. The plants had not received growth regulator applications. The damage on the plants was random in the planting block with no set pattern. I examined them under a dissecting microscope and found a low infestation of broad mites on the plants. I would expect to see this type of injury near a vent where the crop was being held on the cool side.



Plume Moths

We had a plume moth on our building here at the research center on April 6. Plume moths can be a problem on lisianthus in high tunnel production. Monitor your crop closely for this caterpillar and look for fecal droppings.

Control: Pylon can be used in the greenhouse.



Weed Control in Cut Flower Operations

We visited a cut flower operation that had peony plants popping up through the ground.

Surrounding the plants were a lot of thistle plants also popping up in the growing area. Controlling thistle can be very challenging especially when it is growing so close to plants. Hand digging of thistle is very difficult since you have to get most of the root system out of the ground. This grower puts a plastic cup over the end of a spray nozzle and places it over the individual thistle plants when treating it with glyphosphate (Round-Up).



The cup prevents the Round-up spray from drifting onto the desired plants. If you try this method keep in mind applications of Round-up in the spring made to thistle usually burn back the top but the plant grows from the root system again. In the fall you see better control. If anyone has any other methods for controlling thistle in cut flower beds, please let us know.

Herbs - Basil

Basil (*Ocimum basilicum*) has been a big money crop for many greenhouse growers. The plants are easily grown from seed and they grow relatively quickly. This herb, a member of the mint family, is a native of Central Asia and North West India. Most people are not aware that basil is a perennial, adapted to warm growing conditions, but is typically grown as an annual in Maryland. In Florida basil has the largest acreage for greenhouse plants compared to all other herbs. There are a couple of things to keep in mind when growing basil. Keep the fertility on the light side with the soluble salt levels at .8 – 1.2 mcS. If the salts get too high with basil the margins of the leaves will burn.

Insects on Basil: At this time of year we find melon aphid and greenhouse peach aphid on the plants. Melon aphids tend to be found in the center of the plants in early infestations. Green peach aphids build up on tip growth of plants. As it warms up in mid May check the plants for thrips. Basil is not a preferred plant but if you have thrips in the greenhouse they can cause a fair amount of damage to the plants. If you are growing basil organically you can use spinosad sold under the name entrust Naturalyte Insect Control from Dow Agrosiences.



Aphid and Thrips Control on Basil

Commercial product	Active ingredient	Company
Azatrol	Azadirachtin	PBI/Gordon Corp
Nemix	Azadirachtin	Certis Company
Aza-Direct	Azadirachtin	Gowan Company

Citrus mealybugs will find this plant and love it to death. Stay on top of mealybugs, especially around your basil plants. Neem products can be used to suppress mealybug populations. Our growers in Maryland found that applying Soap (M-Pede from Dow Agrosience) followed by an oil application gives the best control of mealybugs.



Diseases: In the next issue, we will include information on diseases on basil.