

## **Vermont Vegetable and Berry News – Sept. 10, 2008**

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### **CUCURBIT DISEASE UPDATE - UVM PLANT DIAGNOSTIC CLINIC**

Ann Hazelrigg

I recently got my first sample of downy mildew on cucumbers this season. I imagine the disease has been in the state for a week or two. It comes in on storm fronts and causes angular shaped leaf spots on the upper foliage, with purplish gray fungal spores on the undersides of the foliage. Often, the petioles remain upright and the foliage dies. It can happen very quickly if the weather is right for the disease. The disease is managed by scouting regularly, using resistant varieties (although there are new pathotypes of the fungus so all bets are off about disease resistance) and fungicides. The degree of susceptibility is #1 cucumber, #2 muskmelon, #3 Cucurbita pepo including pumpkin and acorn squash and summer squash, #4 winter squashes like butternut. Organic growers can use copper or sulfur. If you haven't kept up with sprays, protecting new growth on plants, you will not likely be able to "rescue" your planting - especially if hurricanes keep moving up the coast to Vermont.

I've also been seeing scab on cucumbers causing leaf spots on the upper foliage surrounded by a yellow halo. The holes can drop out and look really tattered and shot holed. The infected fruit starts as small sunken specks on the skin. These remain sunken, enlarge and can often ooze sticky exudates. Use resistant cucumber varieties and rotate out of cucurbits for at least two years.

Black rot is coming in on butternut squash. The disease starts as water-soaked dark green spots on the fruit that turns leathery and cracked.

If we get soaking rain watch your pumpkin fields, especially low spots, for Phytophthora fruit rot. It starts out as a small watersoaked spot on the fruit, then enlarges and produces white spores. It can collapse pumpkins fast. It is best to harvest pumpkins as soon as they start to turn orange and store in a dry place just so you don't have to deal with the late season hurricanes causing more diseases to flourish.

### **REPORTS FROM THE FIELD**

(Starksboro) At this point in the season, I'm usually worn to frazzle, so it doesn't surprise me that I want to say "This has been the toughest year, weather wise, in the last quarter century." We lost 4 acres of fall brassicas on a wet field, lost the midsummer greens, and the winter squash and pumpkins had poor pollination due to the rain. However, it ain't over 'til it's over, and with decent potato and carrot crops still to come, I may feel more sanguine come December.

(Woodbury) The sunny weather came at a good time. It did feel odd to be irrigating again, but our soils drain well enough that we had no choice. We were able to finish our onions and stop the spread of some diseases. Our potato-topping went well with the hot and dry weather to seal off the vines. We will start harvesting them in a week or so. Winter squash is finishing up and will be out of the field in a week. There are more fruit in there than I had thought, but still a disappointment based on how the patch looked before the rains came. Still picking crazy green beans. Botrytis is in the first tomato house but the second one is holding firm. I am ready to start transitioning into fall stuff. Ready for a winter rest.

(S. Royalton) Melons are in their swan dive. After a slow start, I am finally looking at a cooler full of them just as the plants crap out. This hot and dry thing has been what the farmer ordered. Greens that were looking diseased have actually grown out of it and look great. Corn ears are well filled out but are a bit small. Market sales are very strong and I was only held back by a lack of product because of the weather.

(Westminster West) Hard to believe that we wanted some rain, but we did and so it rained! Now the newly planted cover crops will germinate and all will be well. Harvesting some really nice pumpkins and starting on a bit of winter squash; prices are high but not really selling until the weather cools a bit. Happy with the decision to grow mostly PMR varieties of pumpkins and squash, hardly any powdery mildew in the fields and we usually have real problems with that. Fall mums and asters are selling, a bit ahead of last year's pace. I really see a price sensitivity emerging, with some stores doing a better job on promotion than others, margin flexibility should be key and keeping eyes on the larger profit picture, but that takes a really good buyer at the store level. Some insect damage of tunnel raspberries, otherwise quality is very good.

(Wolcott) The explosion of diseases I was waiting for arrived with full fury. One of our grower's fields has come down with a nasty case of cucurbit scab, and will likely have to be sold off for processing rather than harvested for seed. Scab is one of those diseases that kind of lurks around fields waiting for just the right conditions, and then explodes. Yuk. On our own fields, we've had our first-ever outbreak of tomato mosaic virus, which appears to have come in on a particular batch of seed that we purchased from CA. So far every production variety except one has tested positive for it, so we're going to lose them all as seed crops and have to sell them for processing. The only good thing you can say about it is that there's a relatively cheap and very quick strip test that has proven to be sensitive enough even for testing small amounts of seed – so we can be pretty certain that we're getting rid of every last bit of the disease. But we can't even blame this one on the weather – it's spread by handling and we did it ourselves while stripping lower leaves before we noticed the symptoms on the variety that brought it in. We've never dealt with this disease before, but we've had a painful crash course this year. We'll never again plant any seed from another source without growing it out in a trial for a year first!

(Salisbury NH) Cooler nights are helping the lettuce and spinach come along nicely. Our winter squash might not make it before a frost--we didn't get it planted in time. The yield on potatoes seems very low. Squash bugs are making trouble on summer squash. We pick

nice looking squash and the next day little brown spots appear. Received 3.5 inches of rain with the storm on Sept 6th. Peppers are finally turning red. Tomatoes have been great the last few weeks; they were very late this year because of all the rain in late July and early August. Sales have been great. Our biggest problem is not being able to grow enough for our market. There's always next year!

(Grand Isle) We quickly switched from too wet to too dry. Thus we have been moving pipe and irrigating for the last week or two. Yellow jackets have decided to make hives in the bell ends of a number of pipes in our pipe pile. We are attempting to provide them with free "u haul moving service" out of town. Our winter squash ripened nicely and we are busy harvesting squash into apple bins. We have not had tarnished plant bugs in the lettuce this year and therefore have not sprayed lettuce at all. Galinsoga weed has taken a big hold on the farm this year. We are looking forward to a good fall wrap-up for the year. Reminder to self: Do not try to grow broccoli when it is 89 degrees on Sept 5!

### **HIGHBUSH BLUEBERRY WEB SITE**

Michigan State Univ. has a comprehensive website that provides information on all aspects of blueberry production and management. The site is easily through 'clickable categories' that include blueberry production, varieties, diseases, insects, nutrition, propagation, etc. See: [www.blueberries.msu.edu](http://www.blueberries.msu.edu)

### **PUMPKIN HARVEST AND STORAGE TIPS**

Adapted from UMass Extension Vegetable Notes)

Ideally, pumpkins should be harvested when fully mature, with a deep orange color and hardened rind. However, as long as pumpkins have started to turn color, they will ripen off the vine if held under the proper conditions. While not ideal, this may be preferable to leaving them in the field, where diseases, wildlife, and cold temperatures can reduce quality. Pumpkins can be ripened in a well-ventilated barn or greenhouse. The best conditions for rapid ripening are 80-85 degrees F with a relative humidity of 80-85%. (However the fruit will ripen at 'room temperature' too, but more slowly.) Night temperatures should not drop below 60 degrees.

Once ripe, pumpkins should be stored in a cool, dry place, ideally 50-60 degrees with relative humidity of 50-70%. If the humidity is higher you may get condensation on fruit, increasing risk of disease; lower humidity can cause dehydration. If the temperature is higher, increased respiration can cause weight loss; lower temps cause chilling injury. Fruit placed in storage should be free of disease, decay, insects, and unhealed wounds. Handle with care. Once the rind is bruised or punctured, decay organisms will invade. Place fruit gently in containers and move bins on pallets. Use gloves to protect both the fruit and the workers.

## **FARM DESIGN COURSE**

Yestermorrow Design/Build School, Warren, Vermont. October 19-31.

This course is aimed at people working on small farms: a farm apprentice responsible for building a chicken coop; a new farmer with a farm in need of regeneration; an established farmer looking to make capital improvements; or the family homesteader who needs a sheep barn. Topics include: energy efficiency and independence, barnyard layout, barn design and rehabilitation, site planning, sheds and outbuildings, greenhouses, root cellars, housing, and long-term planning. Bring a design project to the class. A small building project at the school or a local farm will offer hands-on chance to safely learn the basics of construction. Farm visits, presentations, and guest lectures will show a variety of approaches. Beginner to Intermediate. For more info contact: Bob Ferris, Yestermorrow Design/Build School, [www.yestermorrow.org](http://www.yestermorrow.org), (802) 496-5545, [bob@yestermorrow.org](mailto:bob@yestermorrow.org).