

Vegetable Diseases  
Richard M. Riedel

1. Angular Leaf Spot on Pumpkin:

This disease was found recently on Howden variety pumpkin in central Ohio. Wet weather with high winds and warm temperatures provide perfect conditions for the development and spread of this bacteria causing this disease. First symptoms of the disease are water soaked lesions on the leaves. The lesions expand until they are limited by leaf veins which causes them to take on an angular shape. The water soaked areas become light tan to white in color, dry out and fall out of the leaf leaving an angular shot hole in the foliage. During periods of moist weather, bacterial oozes form on the underside of the affected leaves. This can infect other leaves or, more seriously, the developing fruit. Infected fruit will develop water soaked spots which enlarge and penetrate through the rind. All cucurbit vegetables can be affected. The bacteria causing this disease can be seed borne and they can over winter in soil in infested plant tissues from pervious crops. Clean seed and clean soil are important control methods. Infested plants can be sprayed with fixed copper fungicides. However, the fungicide itself can damage cucurbits, causing marginally yellowing and burning of the leaves, and it will slow but not halt disease development.

2. Phytophthora Blight of Cucurbits,

Tomatoes and Peppers: High temperatures accompanied by lots of rain which leads to a few hours of ponding in the field provide the necessary conditions for development of this disease in cucurbits, tomatoes and peppers and some reports of this disease have been received this week. Symptoms in cucurbits and peppers progress from blackish- green water soaked stem lesions to wilt and rot of the entire plant. White mold will develop on pumpkin fruit green or orange stages. Affected fruit rapidly rots. Pepper fruit may become filled with mold before rot symptoms develop externally. Tomato fruit in contact with soil will develop Buckeye Rot symptoms. Generally, whole tomato plants will be destroyed by this disease although seedlings may be damped off. This fungus, *Phytophthora capsici*, is soil borne. It will be moved with the soil. Unlike a closely related fungus, *P. infestans* which causes Late Blight of Potato and Tomato, its spores will not be wind borne to any degree. *Phytophthora* Blight development is usually restricted to areas of the field which flood, therefore. Even though this disease can destroy a planting in 24 to 48 hours after the first appearance of symptoms, it will not generally spread to other areas of a planting unless flooding of these areas occurs. Replanting areas of a field that have been destroyed by this disease with susceptible crops, any cucurbit, peppers or tomatoes, is risky. The fungus will be present in these areas in high numbers. In the event of another bout of flooding the disease will rapidly develop. Control of this disease depends primarily on site selection. Susceptible crops must be planted on well drained soil which does not pond water. Surface drainage can be improved by planting tomatoes and peppers on raised beds with rounded tops. Because of vine growth, pumpkin production on raised beds has not been successfully used to control this disease. Susceptible crops should not have been planted in the area for

at least three years. Crop rotations is extremely important for continued control of Phytophthora Blight. Sweet corn, field corn and small grains are among the best non-host rotation crops for reducing populations of *P. capsici*. Peppers, tomatoes and vine crops should not be rotated with each other. Ridomil Gold is an effective fungicide for control of this disease, if other cultural control have been used. It will not give economical control in areas prone to flooding. Before using this material read the labels and note restrictions on application methods, PHI and crop rotations. Ridomil Gold will not control other important fungal diseases of tomato, peppers and cucurbits. For this reason and to control development of fungal resistance to the fungicide, it must be used with broad spectrum fungicides such as chlorothalonil or mancozebs. Package mixes of these materials are available from the manufacturers.

Insect News  
Celeste Welty

There has been a increase in the number of European corn borer ECB moths caught in pheromone traps during the past week (8 moths at Fremont, 1 moth at Columbus; see below for Meigs Co. and Celeryville), which probably indicates the very beginning of the second generation. The number of ECB moths in a blacklight trap at Fremont is shown below. We have had 5 weeks with low numbers of moths. It is usually about 4 weeks from the end of one flight until the start of the next. It is likely that many moths will begin emerging in the next week. There is usually one or two weeks of moderate catches before 3 to 4 weeks of high catches. Moths will mate then lay eggs on pepper leaves or on leaves near ears of silking corn. Eggs take about 4-5 days to hatch. Pepper growers should be ready to start their spray schedule as soon as the major emergence of moths begins.

[Dates Number of moths]

4/24-4/29 = 0;

4/30-5/6 = 1;

5/7-5/13 = 8;

5/14-5/20 = 485;

5/21-5/27 = 57;

5/28-6/3 = 113;

6/4-6/10 = 1;

6/11-6/17 = 2;

6/18-6/24 = 2;

6/25-7/1 = 0;

7/2-7/8 = 2.

The other insect of interest to sweet corn growers is corn earworm (also called tomato fruitworm). Earworm has been caught in low numbers throughout the summer thus far, unlike some years when it is not detected until late summer. Our most recent weekly counts from pheromone traps are shown below.

Columbus: 6 (up from 0 previous week);

Fremont: 0 (down from 1);

Gibsonburg: 0 (down from 5);

Darke County (mean of 9 traps): 5.1 (first week traps out)

Variegated cutworm:

Moths remain active at most sites but there is little evidence of larval activity in tomato fields being scouted weekly in Sandusky and Darke Counties. There was some larval damage in our tomato plots in Columbus where moth catch has been very high.

Columbus (mean of 3 traps): 131 (up from 56);

Fremont: 14 (up from 5)

Gibsonburg (mean of 3 traps): 5.7 (up from 1.3);

Darke County (mean of 9 traps): 4.2 (first week traps out)

## Crop Reports

Hal Kneen, Ron Overmyer, Brad Bergefurd and Thom Harker

### NorthWest.

Pickling cucumber harvest has started. It will be a drawn out season due to staggered planting dates this year. Labor for harvest seems to be adequate at this time. Everyone is sensitive to the child labor issue this year.

The tomato crop is progressing well. Timely rains and moderate temperatures have helped the crop develop. Some late cabbage was transplanted last week. Hail did go through the Sandusky/Ottawa County area about 2 weeks ago. There was some isolated leaf damage but nothing severe is being reported at this time.

### SouthWest.

Rains measuring 0.25 to 1 inch came to the SW Ohio area last Saturday AM. These rains were welcomed by growers who had recently finished planting pumpkins, beans, and sweet corn.

Harvest of beans, summer squash, sweet corn, collard and kale greens, cucumbers, and cabbage continues. Growers continue to sidedress sweet corn with nitrogen trying to "even" fields growth out. Fertigation by drip irrigation has started on pepper crops.

Cucumbers beetle feeding on vine crops has decreased with growers reporting little recent damage from this pest.

The late planted pumpkin crops, end of June early July plantings, have jumped out of the ground quickly with several plantings at the 2nd true leaf stage in less than 10 days, due to the heat and moist soil conditions. Applications of POAST grass herbicide are being made to grass escapes in vegetable fields.

Market demand and price for all vegetable crops remains above average with a lack of adequate supply for beans, tomatoes and sweet corn in our area.

### SouthEast.

Harvest of sweet corn and tomatoes is widespread. Tomatoes selling for \$0.80 to \$1.00 per pound in five and ten pound baskets. Sweet corn selling wholesale \$2 to \$2.75 a dozen if worm free. Bell peppers should be ready next week (7/12) in some quantity. Last of cabbage is being harvested. Last week's OH river flooding and heavy rains have taken their toll on some parts of the fields. Low lying fields are seeing some plant and fruit damage: phytophthora in peppers, rhizoctonia and buckeye rot in first set of tomatoes, some cracking, sunscald in peppers, root and stem damage in vine crops and water damage in sweet corn. Disease pressure is high and Tomcast DSV have reached 100. Early blight on lower tomato leaves is seen scattered throughout the region. Delayed spraying, due to

flooding , is reason for seeing more early blight than normal. Fungicides are being spray at 13 DSV on Mt. Spring variety and 15 DSV on Sunbeam and Sunbright varieties with good control. Third string trellising has been completed for most tomato growers. Growers are cultivating, sidedressing nitrogen in the row or through trickle to make up for lost nitrogen due to the heavy rains

Insects: There is some corn earworm damage in sweet corn Insect counts for the past week.

ECB- 0;

CEW- 2;

Variegated cutworm-24.

#### TOMCAST Report

Disease Severity Value (DSV) Hotline -1-800-228-2905

Jim Jasinski

#### What's New At The VegNet Web Site

Visit: "The Problem of The Week" For Pictures of...

Angular Leaf Spot, Buckeye Rot and Phytophthora Blight of Cucurbits.

Timber Rot and Hail Damage.

The Meigs /Washington Vegetable Tour from SE Ohio, (Sweet corn, tomatoes + peppers)

Check Out the New Look of the Tomcast Section (requires your browser to be able to view frames.)

+ A New Tomato Research Report by C. A. Wyenandt, R. M. Riedel, M. Bennett and C. Welty.

From The Vegetable Crops Planner: Links now provided to the National Weather Service Offices in Cleveland and Wilmington, OH. Provides Agricultural Observations, soil temperatures, climate summaries, growing degree days and much more.

1998 Ohio Vegetable Production Guide - Online. Visit: "The Library

#### Return to Vegetable Crops Homepage Ohio State University Extension

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