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Ohio State University Extension Vegetable Crops

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Powdery Mildew and Downy Mildew Spotted on Pumpkins in South Charleston, OH  
by Jim Jasinski and Bob Precheur

Pumpkins planted in mid May as a trap crop for cucumber beetles are now showing symptoms of both Downy and Powdery Mildew.

Symptoms of Downy Mildew are very similar to Powdery Mildew. Downy mildew will cause the upper sides of leaves to yellow and brown out and produce grayish/white fungal masses only on the underside of leaves.

Downy mildew of pumpkin. Symptoms on upper leaf surface (left), and olive grey lesions underside of leaf (center) and typical symptoms in field on (right).

Powdery Mildew will produce white fungal masses on the upper and lower leaf surface and the stem ruining quality if left uncontrolled. Also if downy or powdery mildew cause high defoliation the fruit exposed to direct sunlight on hot summer days may begin to show symptoms of sunscald. Powdery Mildew will be more prevalent during drying weather; Downy Mildew will begin to show up more often during cool, wet weather. If downy mildew comes in, probably not before mid-late August, then the weekly program should include a fungicide such as Tanos/Manzate, Previcur Flex + Bravo, or Gavel + Bravo alternated with Ridomil Gold Bravo or other fungicide with a different mode of action (different Fungicide Group).

Powdery mildew pustules on upper leaf surface (left), and pustules growing together on upper leaf surface (right).

The first signs of powdery mildew are pale yellow spots on leaves, vines or petioles. These spots enlarge and become covered with white spores that appear powdery. Scout your fields by looking at the older leaves first although these symptoms can be found on younger leaves. Fields in low lying areas where mist forms and remains for long periods during the night are usually affected first. Make the first application when powdery mildew is detected in the area or is detected by scouting (one lesion on the underside of 45 old leaves). Once powdery mildew shows up, a good powdery mildew product should be included such as Amistar, Procure or others. Nova is also recommended for control and rotation.

Consult the OH Vegetable Production Guide, Bull. 672 for recommended fungicides for pumpkins and other vine crops.

Correction to the Web Location of the Pumpkin Field Day 2005 Flyer by Jin Jasinski  
An incorrect web address for the pumpkin field day flyer was given last week.

The correct address is below:

[http://www.ag.ohio-state.edu/~swest/ipm/Documents/Pumpkin\\_20052.pdf](http://www.ag.ohio-state.edu/~swest/ipm/Documents/Pumpkin_20052.pdf)

For more information, contact Jim Jasinski at 937-484-1526 (office), 937-462-8016 (research station), or [Jasinski.4@osu.edu](mailto:Jasinski.4@osu.edu).

Squash bugs and Squash vine borer on the rise...by Jim Jasinski and C. Welty  
Squash bug adults have been increasing in vine crops over the past few weeks. Female squash bugs have been laying eggs over this same time frame. Squash bug eggs are rusty red in color and laid in a loose mass of 10 - 20 eggs per cluster on the petioles and leaf undersides (see pictures below). These egg masses are often parasitized and killed by tiny wasps. The current threshold of greater than 1 egg mass per plant at the time of early flowering usually justifies treatment. Insecticides are most effective against younger and smaller nymph stages, but unfortunately may also kill beneficial wasps and other insects in the canopy. The pyrethroids (Ambush, Asana, Capture, Danitol, or Pounce) are good for controlling this pest if directed against stems and the underside of leaves.

Moths of squash vine borer were detected in pheromone traps in central Ohio starting on 16 June. Although we are likely past the time of peak egg-laying, moths are still being found. On July 18th, Squash vine borer moths were seen flying at the Western Agricultural Research Station in South Charleston. The moth resembles a wasp with purplish wings and an orange abdomen (see picture below). The females lay eggs at the base of the plant. The eggs hatch into tiny caterpillars or "worms" that tunnel into the base of the plant. Continued feeding inside the vine will cause the vine to wilt, resembling bacterial wilt. Evidence of this borer can be confirmed by looking for the entry hole at the base of the plant. The hole and surrounding area will be full of a brownish or yellow material called frass, or insect feces. If a hole is found, the vine can be sliced open to reveal the whitish "worms" which should be promptly destroyed. Once the borer is inside the vine, insecticide control is not possible. Insecticide sprays need to be directed at the base of the plants on a 7 day schedule while the squash vine borer moths are actively flying. Thiodan or a pyrethroid (Ambush, Asana, Capture, Danitol, or Pounce) are most effective for control. Two sprays, one week apart, should target hatching eggs, usually in mid-July.

Squash bug colony (left and center) and squash bug eggs on upper leaf surface (right).

Adult Squash vine borer (left) and larva damage to stem (center) and uniform yellowing of leaf caused by stem feeding (right).

#### Crop Reports

Southeast Ohio 7/20/05 by Hal Kneen

#### Trap Counts

European corn borer: 0 for 7/12/05; 0 for 7/20/05.

corn ear worm: 1 for 7/12/05; 42 for 7/20/05.

Beet armyworm: 1 for 7/12/05; 6 for 7/20/05

Water: Letart, Oh is still dry, less than 1 inch in 7 weeks. Irrigation guns and trickle going strong. Pomeroy got 4.5 inches the evening of 7/18/05.

Tomato, pepper, eggplant and cucumber fruit under irrigation is beautiful. Tomato harvest started with large pickings 7/11/05. Bell pepper harvest started last week. Fruit size is more in the large size categories.

Muskmelons are very sweet but size is somewhat smaller than normal due to heavy water demand and lack of rain. Those under trickle are normal size.

Sweet corn is very good where it has been irrigated but not in un-irrigated land.