Virginia Cooperative Extension

Plant Disease Fact Sheets

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Angular Leaf Spot of Cucumber

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Angular leaf spot of cucurbits is caused by the bacterium *Pseudomonas syringae* pv. *lachrymans*. Although the bacterium can attack a wide range of cucurbits, the disease is mainly important on cucumbers in Virginia.

Symptoms

The bacterium attacks the leaves, stems and fruit of cucurbit plants. On leaves the bacterium causes small, angular, watersoaked areas which later turn brown or straw-colored (Fig. 1). Leaf lesions are delimited by the veins, hence the angular appearance of the lesions. Under humid conditions, a white, milky exudate, consisting of bacteria, forms on the lesions and dries to form a thin, white crust. Affected leaf tissue often dries and drops out, leaving irregularly shaped holes in the leaves. Heavily infected leaves may turn yellow. Lesions may also occur on petioles and stems.

On fruit the bacterium causes circular spots. These spots often crack open and turn white in color. Rot may extend internally and predispose infected fruit to secondary bacterial soft rot.

Fig. 1. Angular leaf spot symptoms on a squash leaf. (Photo by R. L. Wick-U. Mass.)

Disease Cycle

The bacterium can overwinter in seed and on diseased plant debris in the field. Seed-borne bacteria spread to the cotyledons when the seed germinates. Splashing rain spreads bacteria from the soil to plant parts and from plant to plant. The organism is easily spread in the field by cultivation equipment, harvesters, and by wind-blown rain. Angular leaf spot is most active between 75°-82°F (24°-28°C) and is favored by high humidity.

Control

Cultural Control

- Use pathogen-free seed produced in arid regions where the disease is not a problem.
- Rotate infested fields out of cucurbits for at least 2 years.
- Avoid working among plants when foliage is wet.
- Avoid overhead irrigation.

Chemical Control

- At the first sign of disease, apply fixed copper + maneb at label rates. Repeat sprays every 7 days. Refer to the current Virginia Pest Management Guide for Home Grounds and Animals (VCE Publication 456-018) or Commerical Vegetable Production Recommendations (VCE Publication 456-420) for details on chemical control.

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Resistance

- Plant resistant cultivars. The cucumber cultivars listed in Table 1 have resistance to angular leaf spot.

Table 1.

Cucumbers with resistance to angular leaf spot

Pickling		Slicers	
Calypso-F1[1]	Fancipak M-F1	Daytona-F1	Potluck-F1
Carolina-F1	Lucky Strike-F1	Fanfare-F1	Speedway-F1
Conquest-F1	Wellington-F1	Indy-F1	Turbo-F1
Eureka-F1			

[1] *F1 refers to the hybrid generation produced by a cross of two inbred lines. Seed from these plants will not produce plants that are true to type and should not be saved for future plantings.*

Refer to the current Virginia *Pest Management Guide for Home Grounds and Animals* (VCE Publication 456-018), http://www.ext.vt.edu/pubs/pmg/, for details on the proper use of pesticides.