Cucurbit

Pythium Fruit Rot (Cucumber, Melon, Pumpkin, Squash, and Zucchini)

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Identification and Life Cycle

Pythium fruit rot (also called Pythium cottony leak) of cucurbits is caused by several fungus-like organism of the genus *Pythium*. The disease is most severe on cucumber, but watermelon, pumpkin, and melon can also be affected. *Pythium* spp. are found in most, if not all soils, of the world. Fruit infection occurs through wounds or where fruit touches wet soil. The pathogens grow quickly through diseased tissues. The Pythium fruit rot pathogens are readily disseminated within and among fields in irrigation water and on contaminated equipment. *Pythium* spp. survive between cucurbit crops as pathogens on many crops and weeds, and as dormant resting structures in soil.

Plant Response and Damage

Pythium fruit rot symptoms begin as brownish, water-soaked lesions that quickly become large, watery, soft, and rotten. The rot generally begins on the parts of fruit in contact with the soil. In cucumber, a brown to dark green blister often is apparent on fruit before they become watery and rot. White cottony mycelium is apparent on rotten tissues, especially during humid weather. Pythium fruit rot is most severe in poorly-drained fields during wet weather. The disease can render fruit unmarketable.

Management Approaches

Biological Control

No biological control strategies have been developed for Pythium fruit rot.

Cultural Control

Cucurbit should be planted on sandy, well-drained soils to allow rapid drainage after rain or irrigation. Avoid dense plant populations and narrow row spacing that leads to dense vine matting. Plastic mulch can provide some disease reduction in semi-arid
production environments, but should not be used with overhead irrigation or in high rainfall production areas because water accumulates on the plastic and promotes fruit decay.

**Chemical Control**

Chemical controls should be used in combination with cultural controls to be most effective.

**Product List for Pythium Fruit Rot:**

<table>
<thead>
<tr>
<th>Pesticide</th>
<th>Product per acre</th>
<th>Application Frequency (days)</th>
<th>Remarks</th>
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</thead>
<tbody>
<tr>
<td>Mefenoxam</td>
<td>4-8 pt</td>
<td>Preplant-broadcast</td>
<td></td>
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<td>Ridomil 2E</td>
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Categories: Cucurbits, Disease, Pythium Fruit Rot, Cucumber, Melon, Pumpkin, Squash, Zucchini

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