



DISEASES OF CUCURBITES

Session-16

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DOWNY MILDEW

Causal organism: *Pseudoperonospora cubensis*

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Host range: Musk melon, Sponge gourd and Bitter gourd etc.

SYMPTOMS

- Yellow, angular spots appear on upper surface of leaves.
- The corresponding lower surface of these spots shows a purplish downy growth in moist weather.
- The spots turn necrotic with age.
- The diseased leaves become yellow and fall down.
- Diseased plants get stunted and die.
- Fruits produced may not mature and have a poor taste.

DISEASE CYCLE

- P.I: Collateral hosts or fungus surviving in plant debris.
- S.I: Wind borne sporangia or splashing rain water.

MANAGEMENT



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DOWNY MILDEW – *PSEUDOPERONOSPORA CUBENSIS*



R Mulrooney



POWDERY MILDEW

Causal organism: *Erysiphe cichoracearum*

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Host range: Pumpkins, bottle gourd, *Coccinia*, *cucumber*, *ridge gourd* Bitter gourd is less effected.

SYMPTOMS

- Whitish or dirty grey, tiny powdery growth on foliage, stems and young growing parts.
- The superficial growth ultimately covers the entire leaf area.
- The diseased areas turn brown and dry. This leads to premature defoliation and death.
- Fruits remain undeveloped and are deformed.

DISEASE CYCLE

- P.I: Collateral hosts or through Cleistothecia
- S.I: Wind borne conidia

MANAGEMENT

- Spray Calixin 0.1% or Karathane @0.2%.



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POWDERY MILDEW: *ERYSIPHE CICHORACEARUM*





Symptoms:
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VASCULAR WILT

Symptoms of the disease first appear on a single leaf which suddenly wilts and becomes dull green.

The wilting symptoms spread up and down further the entire plant shrivels and dies.

- Creamy white bacterial ooze consisting of thousands of microscopic, rod-shaped bacteria may sometimes be seen in the xylem vascular bundles of an affected stem if it is cut crosswise near the ground and squeezed.

Causal Organism: *Erwinia tracheiphila*

Disease cycle:

- **Primary Infection:** Bacteria survive on striped cucumber beetle.
- **Secondary Infection:** Spread by striped cucumber beetle.

Favourable condition:

- Mon cropping of cucurbits plantation.
- Stripped cucumber beetle population large.

Management

- Resistant variety
- Spraying of insecticides against beetle carbaryl (Sevin), malathion, or rotenone.
- Early control, beginning as soon as the plants emerge.



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