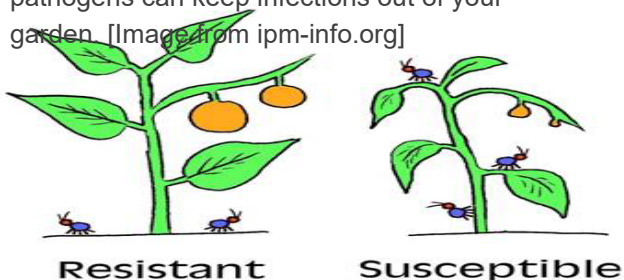




Prospera (left), a cultivar resistant to basil downy mildew, and a susceptible cultivar (right) growing adjacent in the Rutgers University greenhouse. Despite the amount of pathogen in the environment, the resistant cultivar has remained healthy. [Image from Margaret McGrath, Cornell University]

Resistant Cultivars Keep your Plants from Getting Sick

Resistant cultivars are specific types of plants that have been bred to select for resistance to specific plant pathogens. Buying cultivars resistant to local pathogens can keep infections out of your garden. [Image from ipm-info.org]



What is to be done:

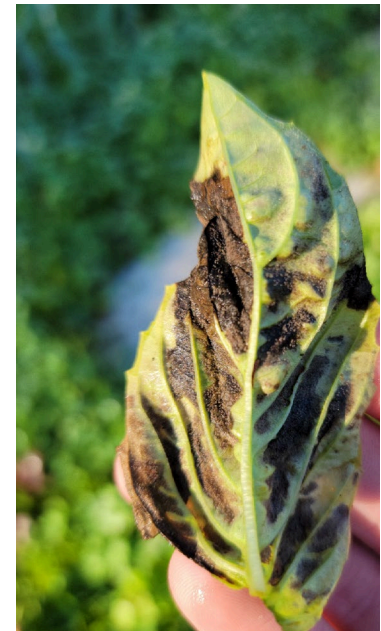
- Choose resistant cultivars when planning your garden
- Don't re-plant in possibly contaminated soil
- Remove infected plants and seeds as soon as possible
- Do not compost or re-use infected plant matter or soil

Additional Resources

University School of
Vegetable Plant Science Extension:
[www.cornell.edu/school-
of-vegetable-plant-science/outreach-
extension](https://www.cornell.edu/school-of-vegetable-plant-science/outreach-extension)

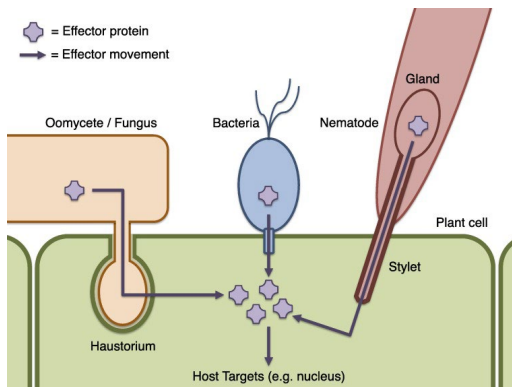
University of Massachusetts
Amherst Center for Agriculture,
Food, and the Environment:
[https://ag.umass.edu/vegetable/fact-
sheets/basil-downy-mildew](https://ag.umass.edu/vegetable/fact-sheets/basil-downy-mildew)

Plant Pathogen Information and Management



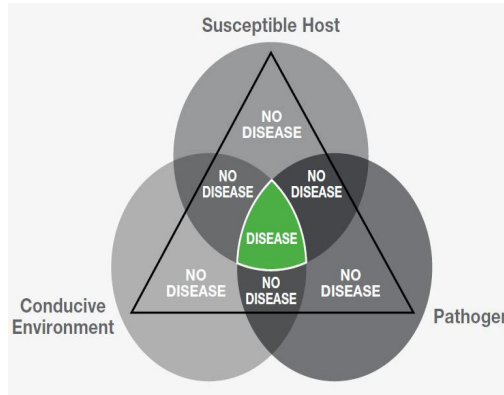
What are plant pathogens?

- Organisms that cause disease symptoms in plants
- Not all pathogens kill the plant; many require a living host to survive
- Pathogen disease symptoms may include lesions, reduced growth, and even visible pathogen growth on the plant



Plant pathogens often use small proteins, called effectors, which they insert into the host plant cell to disrupt the plant's immune system.

[Image from Björn Andreas Grüning University of Freiburg]



If a plant pathogen is present in your garden, it still requires a specific environment and susceptible host to thrive.

Focusing on changing your garden or greenhouse environment (humidity, temperature, soil pH/moisture, etc...), and planting resistant cultivars can help prevent plant infections.

[Image from BASF Agricultural Solutions]

Get more info from the Kansas State Horticultural Newsletter, available at: <https://www.ksuhortnewsletter.org/>

How pathogens spread

- Previously infected seed introduced to new garden or greenhouse
- Fungus in soil infecting through plant roots
- Bacteria/fungi spreading from plant to plant due to proximity

