



DISEASE MANAGEMENT: Anthracnose of Pepper



Colletotrichum acutatum *Colletotrichum gleosporioides*

SIGNS & SYMPTOMS:

- Fruit lesions are circular and can easily reach 1.5 in. in diameter.
- Fruit lesions are always prominently sunken.
- Concentric rings may appear in lesions and are tan to orange to black.
- Less evident are lesions on stems and leaves, consisting of irregularly shaped gray-brown spots.

DISEASE CYCLE & EPIDEMIOLOGY:

- Both *Colletotrichum* species have been associated with seed.
- These fungi survive well in association with crop debris.
- *C. gleosporioides* is known to have a wide host range, including a number of crop species. *C. acutatum* probably has a wide host range as well.
- Anthracnose is favored by periods of high rainfall and high humidity.
- Optimum temperature for infection is 68-75°F, but it can occur up to 86°F.

FIELD SIGNATURE:

- In Florida, anthracnose affects pepper fruit.
- *C. gleosporioides* is a pathogen that is exclusively associated with mature fruits that are beginning to change to the fully ripened color (red or yellow predominantly).
- *C. acutatum* attacks both green, immature fruit as well as mature fruits.
- Always look for large, sunken lesions often covered with black fungal growth.
- This can be confused with the abiotic problem sunscald.

PHOTOS:

Figure 1. Large, sunken anthracnose lesions on immature green bell pepper. Photograph by: Ken Pernezny.

Figure 2. Fruit lesions with conspicuous pink to tan spore masses. Photograph by: Ken Pernezny.

Figure 3. Anthracnose symptoms on ripe pepper fruit. Photograph by: Ken Pernezny.

Prepared by: Tyler Harp and Dr. Ken Pernezny



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CULTURAL CONTROLS:

- Plant pathogen-free seed and practice crop rotation.
- Prompt destruction and burial of crop residue is very, very important.

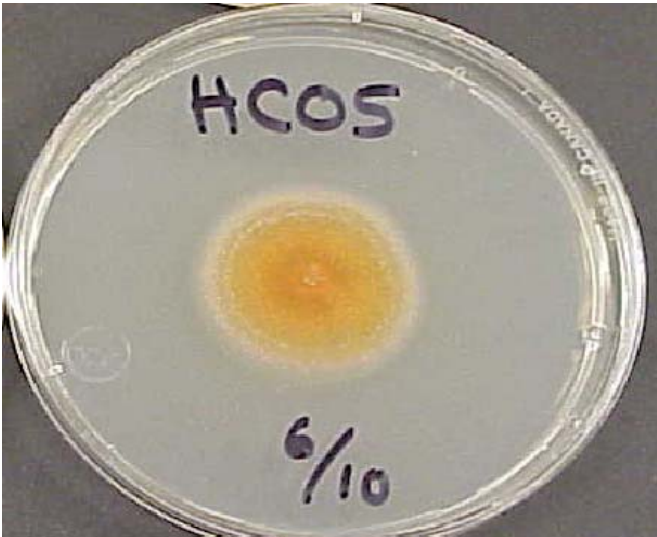


Figure 4. Growth of *Colletotrichum accutatum* on agar plate. Photograph by: Tyler Harp.

CONTACT INFORMATION:

Tyler Harp
UF/IFAS Plant Pathology Dept.
P.O. Box 110680
Gainesville, FL 32611
tlharp@ufl.edu
352-392-3631

Dr. Ken Pernezny
UF/IFAS EREC
3200 E. Palm Beach Road
Belle Glade, FL 33430
klp@ifas.ufl.edu
561-993-1599

CHEMICAL CONTROL:

- Azoxystrobin, famoxadone in mixture with cymoxanil, pyraclostrobin and maneb are currently labeled for pepper anthracnose control.
- Fumigation with methyl bromide may reduce survival of the pathogen in soil debris.

RESISTANCE MANAGEMENT:

- Be sure to rotate strobilurin fungicides, such as azoxystrobin, famoxadone or pyraclostrobin, with maneb and/or copper to reduce the potential for development of resistance to strobilurin (Group 11) fungicides.
- Follow all resistant management guidelines on the label.

RESISTANT CULTIVARS:

- Little is known about cultivar susceptibility to anthracnose, especially now that 2 distinct species have been identified as causal agents. In Ohio, some tolerance to anthracnose was identified in some cultivars.
- For now, assume all cultivars are susceptible.

References:

Alexander, S.A. and K. Pernezny. 2003. Anthracnose, pp. 9-10. *In* K. Pernezny, P.D. Roberts, J.F. Murphy and N.P. Goldberg (eds.), *Compendium of Pepper Diseases*. APS Press, St. Paul, MN.

Lewis Ivey, M.L., C. Nava-Diaz and S.A. Miller. 2004. Identification and management of *Colletotrichum acutatum* on immature bell peppers. *Plant Dis.* 88: 1198-1204.