

Anthracnose of Strawberry

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In 2025 and 2026, the University of Vermont Extension scouted for disease in strawberry fields across Vermont. Anthracnose was among the most prevalent diseases detected during the surveys. **Anthracnose** is a fungal disease caused by three species in the genus *Colletotrichum*: *C. acutatum*, *C. fragariae*, and *C. gloeosporioides*. All three species can affect the crown, roots, runners, and fruit, but some species are associated more with certain infections than others.



A: Crown rot, B: *Colletotrichum* spores, C: Leaf and stem lesions, D: Early fruit rot symptoms, E: Fruit rot, F: late fruit rot decay. Credit: G. Sassi & K. Damann, University of Vermont Extension

Symptoms

General symptoms of any of the *Colletotrichum* spp.

- Black, sunken stem and petiole lesions
- Flower blight, characterized by browned, dried calyx
- Leaf discoloration with black, ink-like spotting

Symptoms of crown rot:

- Leaves may wilt in the midday heat and become turgid again at night.
- Crown tissue will become reddish
- Crown will fully wilt and die
- Crown tissue will become black
- Non-necrotic spots will appear scattered across the fruit's leaves, ranging in color from black to grey

Symptoms of fruit rot/lesions:

- Fruit lesions appear small, sunken, and tan/pale
- Lesions will darken and spread over the berry within 1-2 days
- Darkened seeds
- Pale-orange/salmon colored spore masses may be present

More Information

Colletotrichum fragariae

- The first form of anthracnose found in the U.S
- A primary cause of crown rot.
- Some researchers consider it a host-specific form of *C. gloeosporioides*.

Colletotrichum acutatum

- The primary cause of fruit rot, the most economically devastating form of anthracnose.
- Crown rot caused by *C. acutatum* may stunt the plant rather than kill it and may only infect one side of the crown.

Colletotrichum gloeosporioides

- A primary cause of crown rot.
- Causes crown rot symptoms identical to *C. fragariae*.
- Has a broader range of host plants, including blueberries, apples, tomatoes, cucumbers, and more.
- Broader geographic range than *C. fragariae*.

Disease Process

- Anthracnose is primarily introduced to strawberry fields on infected plants from nurseries.
- The fungus can overwinter on dead plant material, creating a secondary source of infection the following season.
- *Colletotrichum* spores are **mainly spread via rain splash**; however, spores can also be spread by **people, tools, and equipment moving through fields**.
- The latent period (time between first infection and sporulation) is shortened dramatically by **higher temperatures**.
- The disease thrives in **wet conditions** that promote faster conidia growth and increased spore production.

Disease Management of Anthracnose

The most important step for anthracnose control is **acquiring disease-free plants from nurseries**. This is the main way to ensure plants are clean upon planting.

Once anthracnose is present in a field, there are numerous ways to mitigate the spread of disease:

- Drip irrigation is preferred to overhead irrigation as it reduces splash, decreasing spore dispersal.
- Organic mulches and living mulches can help reduce the spread of anthracnose, as plastic mulch can increase the intensity of the rain splash.
- Remove infected plant matter as soon as possible to minimize the disease from spreading further.
- Harvest infected fruit as soon as anthracnose symptoms are spotted, this prevents the fungus from being able to spread onto other fruit/plants.
- Be mindful when harvesting infected fruit: Pick infected fruit last in the day or sanitize hands, tools, and equipment when picking infected fruit to minimize the spread of disease.



Organic mulch Credit: Gerald Holmes, Strawberry Center, Cal Poly San Luis Obispo, Bugwood.org



Strawberry seedling. Credit: Gerald Holmes, Strawberry Center, Cal Poly San Luis Obispo, Bugwood.org

References

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Created: 07/2026

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture. University of Vermont Extension, Burlington, Vermont.
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