Anthracnose Fruit Rot of Strawberries Alert

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Anthracnose fruit rot of strawberries has been observed in multiple counties in North and central Alabama based on reports from Dan Porch, County Extension Coordinator for Blount County, and Dr. Jim Jacobi, Extension Specialist at the C. Beaty Hanna Horticulture & Environmental Center in Birmingham. Anthracnose is the term used to identify strawberry diseases caused by the fungus *Colletotrichum acutatum*. Anthracnose fungi may attack the plant's crowns, petioles, leaves, stolons, flowers, buds and fruit. The term anthracnose can apply to all phases of the disease, but is often reserved for lesions found on stolons and petioles. Other phases are usually described by symptoms, for example, crown or fruit anthracnose.

Anthracnose fruit rot can occur on both ripe and unripe fruit. Infected tissue on unripe fruit appears as round, firm sunken, tan to brown spots that turn into sunken black lesions with age (Figure 1). The spots may remain a light to tan color for a few days, especially during wet weather. The entire fruit may become infected, dried and mummified. Dark brown to black, firm lesions can occur on green fruit of susceptible cultivars.

Sources of anthracnose are difficult to determine. The fungus can survive for several months in the soil or on plant debris. Anthracnose may also survive on alternate hosts during the summer. Infected transplant material can act as the primary source of the disease. Anthracnose is favored by warm to hot, wet conditions with high relative humidity.

Figure 1.

Courtesy of Dr. Gerald Holmes, California Polytechnic State University at San Luis Obispo, Bugwood.org

Control of anthracnose consists of:

1) Use on disease-free transplants
2) Follow a protective fungicide spray program from transplanting through harvest
3) Avoid overhead irrigation, if possible
4) If fruit rot occurs, remove all infected fruit from the field at each harvest
5) To prevent spread of the disease, avoid moving pickers from an infected area of the field to an area where the disease is not present
6) Plant anthracnose-resistant varieties when available. For example, Sweet Charlie is less susceptible to the fruit rot phase than other cultivars commonly grown on plastic according to reports from North Carolina State University.

   There have been reports of anthracnose populations developing resistance to FRAC group 11 fungicides (i.e. Pristine, Cabrio, Merivon, Abound, Azaka), and resistance has been found in Florida and California. Resistance has not yet been reported in Alabama, but growers that suspect a problem should contact their regional extension agent to report a potential problem.

   At this time I would suggest that the FRAC 11 fungicides be used only in mixtures at the low label rate with the medium labeled rate of captan products (Captan or Captec) alternated with captan alone. Reports from NCSU suggest reduced activity with azoxystrobin (Abound, Azaka) with certain strains of the anthracnose fruit rot pathogen, so Cabrio, Merivon, or Pristine may offer better control of the disease.

For more information please refer to the Southern Region Small Fruit Consortium on production recommendations for strawberry and other small fruit in the Southeast. The guide can be found at http://www.smallfruits.org/ . An effectiveness chart for various chemicals for strawberry disease management can be found on page 38 and 39 of the "2019 Southeast Regional Strawberry Integrated Pest Management Guide for Plasticulture Production" at:
http://www.smallfruits.org/assets/documents/ipm-guides/StrawberryIPMGuide.pdf