

Popcorn Disease on mulberry

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FIG. 1

Disease Pathogen Name: *Ciboria carunculoides* (Siegler & Jenkins) Whetzel

Pathogen Type: Fungus

Period of Primary Occurrence: late May through July

- Late May through July when mulberries produce flowers and fruit

Plants Affected

- White mulberry varieties and some hybrids are more susceptible to popcorn disease
- Other types of mulberries are less susceptible

Description / Symptoms

- This disease is known only in the southern states
- Infected carpels on fruit resemble un-popped kernels of popcorn, hence the common name for this disease (Fig. 1-5)
- Infected carpels of the fruits swell and initially remain greenish
- Infected carpels of the fruit eventually develop hard thickened fungal structures (known as sclerotia) (Fig. 4)
- These structures enlarge and extend out beyond healthy berries
- Disease interferes with ripening
- Disease is of little economic importance to home gardeners as it does not lessen the value of the tree as an ornamental
- Overall health of mulberry plants in the landscape not significantly affected
- Popcorn disease on mulberries propagated for fruit production can cause high yield losses

Best Management Practices (BMP)

NON-CHEMICAL CONTROL

- Disease carries from one season to the next so practice good garden sanitary measures
- Collect infected fruit on the trees and any infected fruit on the ground; place and seal in plastic bags for disposal through curbside trash pickup



FIG. 2



FIG. 3



FIG. 4

CHEMICAL CONTROL

- Fungicide sprays are not generally warranted for the home landscape
- When control is desired, a Bordeaux mixture (originated in France) of 4-4-50 is effective.
- For a small amount of mixture, the ingredients are:
 - 3 1/3 tablespoons of copper sulfate
 - 3 tablespoons of hydrated lime, mixed in one gallon of water.
 - The mixture will turn the tree blue; however, the color will eventually disappear.

Caution must be taken NOT to store a mixture of Bordeaux. The ingredients must be kept separate and custom-mixed as a fresh spray.



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Use pesticides only according to the directions on the label. Individuals who use chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. If the information does not agree with current labeling, follow the label instructions. The label is the law.

Always remember to read and heed six of the most important words on the label: "KEEP OUT OF REACH OF CHILDREN"

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