

# LOUISIANA PLANT PATHOLOGY

DISEASE IDENTIFICATION AND MANAGEMENT SERIES

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## Camellia Flower Blight

*Ciborinia camelliae* L.M. Kohn

Camellia flower blight, caused by the fungus *Ciborinia camelliae* (formerly *Sclerotinia camelliae*), is the most common disease of camellias in Louisiana and occurs wherever camellias are grown. The disease affects only the flowers, but infection can occur any time once the flower buds begin to open if weather conditions are suitable. Because the disease is most severe from mid-January on, however, flower blight is most serious on mid-season varieties.

Initially, flower blight appears as small brownish specks on expanding flowers if infection takes place at the petal tips (Fig. 1), but the entire center of the flower may be killed if infection occurs at the base of the petals (Fig. 2). Although cold injury may be confused with flower blight (because both turn the petals brown), cold-damaged petals are firm and have a leathery feel to them. Blighted petals, on the other hand, are soft and watery with a slimy feel. About two weeks after a flower has been killed, a hard black fungal structure, called a sclerotium, develops at the base of the dead flower.

Infected flowers eventually fall to the ground where they decay, leaving the sclerotium in or on the soil or mulch where they survive until the next winter and early spring. They may remain viable, however, for up to five years or more. The same conditions that initiate flowering stimulate the sclerotium to germinate, giving rise to small cup-shaped mushrooms called apothecia that produce millions of microscopic spores. These spores are discharged into the air and may be carried by the wind up to a mile. If weather conditions are favorable for disease development, spores that have landed on camellia flowers will germinate, and the fungus will penetrate the flower tissue. This pathogen does not spread from flower to flower and reproduces only by the production of new sclerotia on the blighted



Fig. 1. Flower blight appears as small brownish specks on expanding flowers if infection takes place at the petal tips.

flowers. These sclerotia then serve as the means of survival and sources of inoculum for the next year.

The use of a combination of several disease-management practices can help reduce the incidence and severity of flower blight. The use of these practices, however, will be most effective where plantings are small, and camellias are not grown on nearby properties. Where large plantings are involved or in areas with extensive plantings in close proximity, a community approach to flower-blight control may be necessary because of the large numbers of spores produced and their ability to disperse over large areas.

Sanitation, the collection and removal or destruction of all infected flowers prior to the

formation of fungal sclerotia within them, is an important part of flower-blight control. Additionally, the use of a physical barrier placed on the ground to cover the sclerotia can be used to prevent fungal spores from reaching the flowers. Asphalt paper, plastic mulch or a thick layer (2-3 inches) of organic mulch may be used to cover the ground under the plants in late December. This can then be removed at the end of the flowering season. Alternatively, repeated applications of the fungicide pentachloronitrobenzene (PCNB) to the ground beneath the camellia bushes and up to 10 feet beyond every three to four weeks will prevent the sclerotia from

germinating and producing spores. The fungicides captan, maneb and mancozeb may also be used as soil sprays, but they must be applied much more frequently than PCNB to be effective. Applications should start prior to and be repeated throughout the flowering period. Lastly, frequent, repeated applications of fungicides containing the active ingredients mancozeb, tebuconazole or triadimefon sprayed directly on the flowers can reduce flower blight considerably. See the label for the appropriate rate and be sure to spray to the flowers to the point of runoff to ensure thorough coverage.



Fig. 2. Flower blight resulting from infections that occurred at the base of the petals.

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