

soil for at least five years.

6. Fungus spores can be carried by air currents at least a mile.

It is evident that sanitation is an important part of blight control. This involves gathering and destroying (by burning or deep burial) all the fallen flowers to prevent the formation of fungal sclerotia within them. This is practical only where plantings consist of a few bushes and camellias are not grown on nearby properties.

Where large plantings are involved, it would be worth considering using a combination of, or all of, the following: a good sanitation program, fungicide ground spray or physical barrier and fungicide flower protectant sprays.

Pentachloronitrobenzene or PCNB is the most effective material found to date that will prevent sclerotia from germinating and producing spores. PCNB is commonly available under the commercial trade name of Terraclor. Terraclor should be applied to the ground beneath camellia bushes and 10 feet beyond each bush at the rate of 1 pound of 75% wettable powder in 3 gallons of water to each 100 square feet of area.

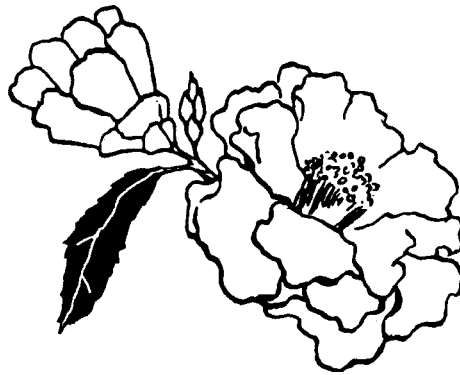
A physical barrier placed between the sclerotia and the flowers can be used instead of the fungicide ground spray. Asphalt paper or a heavy mulch may be used to cover the ground under the plants in late December and can be removed at the end of the flowering season. The function of the barrier is to prevent the fungus spores from reaching the flowers.

This approach is applicable only where a few plants are involved and the only

source of fungus spores is from your own property.

A new approach to flower blight control was evaluated during the 1980s when it was shown that fungicides applied to flowers once a week during the blooming period could reduce blight by 50%.

Products approved as flower sprays for blight control on camellias are Bayleton (use 1 tablespoon per gallon of water at 7- to 14-day intervals), Dithane M-45 (use 1 1/2 tablespoons per gallon of water at 7- to 14-day intervals) and Zyban (use 1 tablespoon per gallon of water at 4- to 6-day intervals). Apply the fungicide sprays to the flowers to the point of runoff.



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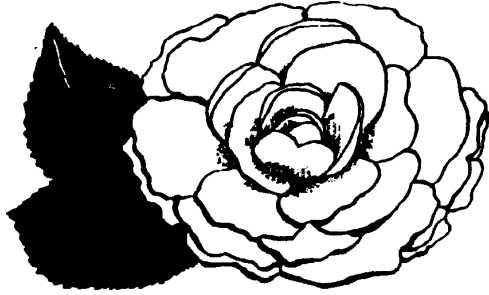
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Camellia Flower Blight



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Camellia flower blight is by far the most serious disease of camellias in Louisiana. This disease is caused by the fungus *Ciborinia camelliae*. It was first reported in Louisiana in 1950 and occurs in all areas of the state where camellias are grown.

Petal blight affects only the floral parts of the plant. Infection can occur anytime after petal tips are visible in opening buds. While infection can occur anytime flowers open up and weather conditions are favorable, the worst infections occur from mid-January on. Therefore, flower blight is most serious on mid-season varieties.

Symptoms

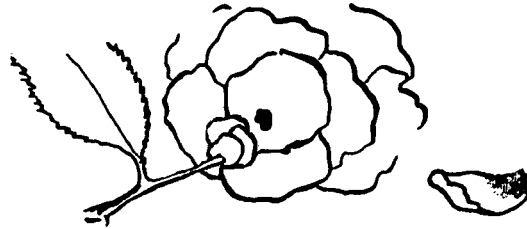
Petal blight first appears as small brownish specks on expanding flowers if infection takes place at petal tips, but the entire center of the flower may be killed if infection occurs at the base of the petal. (See illustration above.)

Although cold injury may be confused with flower blight, it is not difficult to

distinguish between them.

With cold injury, petal tissue turns brown but remains firm and feels leathery.

Blighted petal tissue also turns brown but is watery and soft. When blight-infected flower petals are held between the thumb and fore-finger, the tissue has “give” and “slips” or has a slimy feel. Finally, a black hard body, the sclerotium, develops at the base of the flower about 15 days after the flower has been killed. The formation of the sclerotium is proof of the disease. A typical sclerotium of the camellia petal blight fungus looks like this:



The Life Cycle of the Fungus

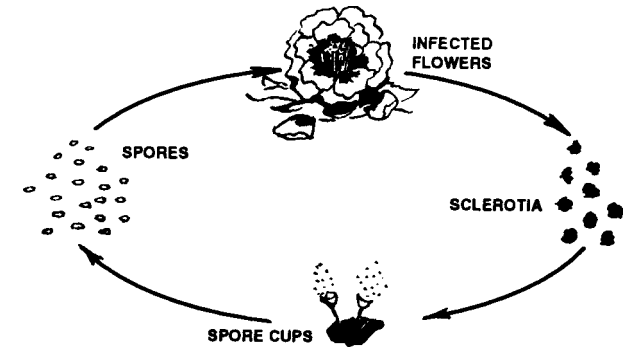
Understanding the life cycle of the blight fungus may help you apply control measures effectively. The complete life cycle of the fungus is illustrated below:

Infected flowers fall to the ground and lie on top of the mulch or are mixed into it. The fallen flowers decay and leave the sclerotia in the soil or mulch. The sclerotia pass the summer and fall in a dormant state. Then in winter and early spring, when camellias are blooming, the sclerotia germinate and give rise to small mushroom-like structures technically known as apothecia or spore cups.

The apothecia in turn produce millions of microscopic spores that are dis-

charged into the air and may be carried by the wind for at least a mile.

If weather conditions are favorable, spores falling on camellia flowers germinate and the fungus penetrates the flower tissue. Since there is no spread from flower to flower with this disease, the final step in the life cycle is the production of new sclerotia on the blighted flower.



Control of Flower Blight

These points should be kept in mind when considering flower blight control measures:

1. The blight affects only the flowers and no other part of the plant.
2. The blight fungus passes the summer and fall in the dormant stage as sclerotia on the ground.
3. Flowers become infected only after the spores are produced on the apothecia (spore cups) in winter and spring.
4. There is no secondary spread of infection from flower to flower.
5. Sclerotia may remain viable in the