

of 50 percent or more during cool, wet seasons. In addition to strawberries, Botrytis causes economic losses on many other crop plants.

# botrytis fruit rot

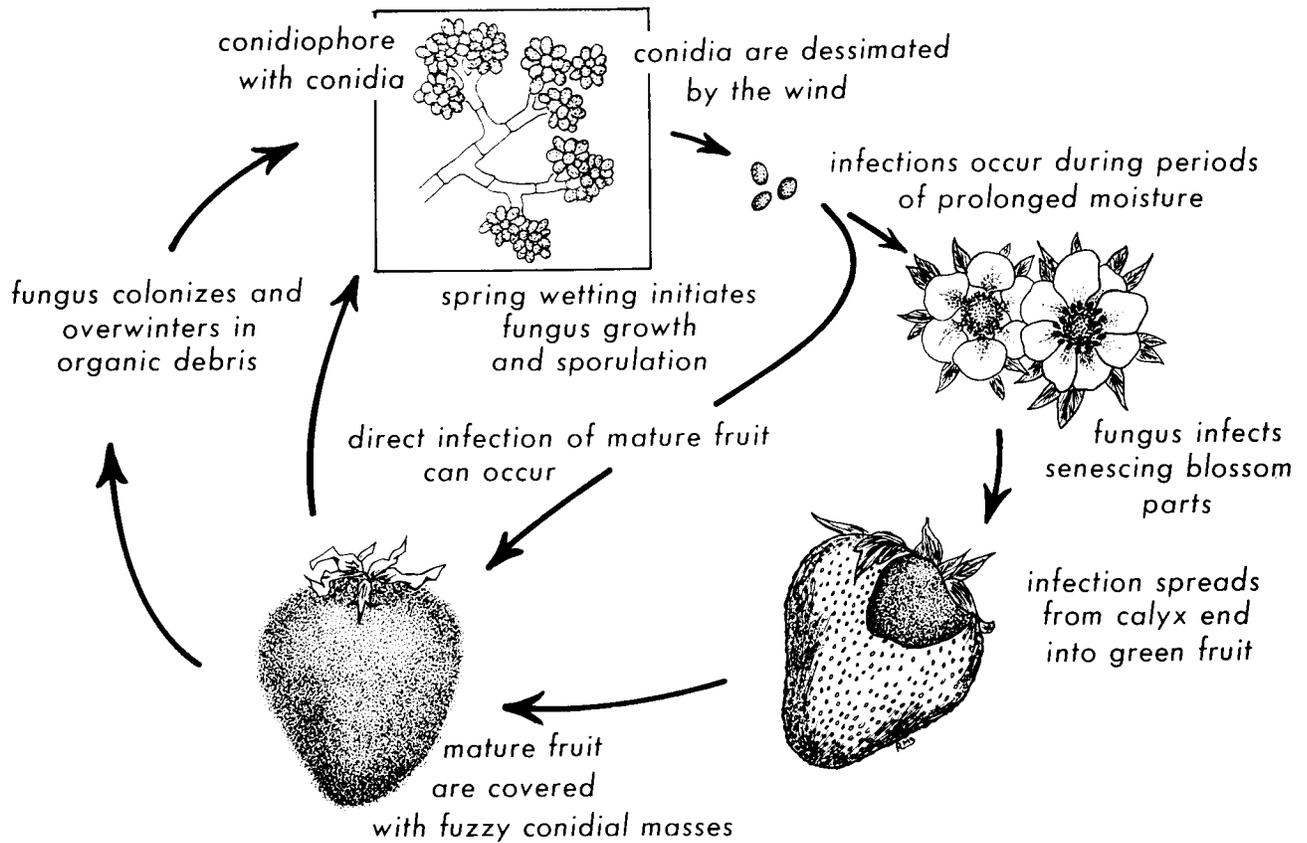
*Botrytis cinerea* Pers.

## DISEASE CYCLE

*Botrytis cinerea* may colonize and produce spores (conidia) on almost any plant debris. It overwinters in strawberry plantings on decayed foliage and fruit from the previous season. Increasing temperatures and moisture in the spring promotes fungal growth and production of conidia which are spread by wind and rain to the developing strawberry plants. Botrytis conidia are abundant throughout the growing season in most strawberry growing areas.

## INTRODUCTION

Botrytis fruit rot, also called gray mold, is a major disease of strawberries throughout the world. The disease, caused by the fungus *Botrytis cinerea*, is responsible for fruit losses



Botrytis Fruit Rot Disease Cycle



Disease development is favored by wet conditions accompanied by temperatures between 5 C (41 F) and 30 C (86 F). Conditions that impede drying of fruit wetted by rain or sprinkler irrigation will encourage Botrytis rot.

Strawberries are susceptible to Botrytis during bloom and again as fruits ripen. During the blossom blight phase of the disease, the fungus colonizes senescing flower parts, turning the blossoms brown. Blossom infections establish the fungus within the plant and produce inoculum that can spread the fungus to other plants. Cool, wet weather and particularly frost injury favors blossom infections. The fungus can then move into developing fruit and remain quiescent until the fruits start to mature, at which time the rot becomes noticeable. Infections may be associated with senescent petals adhering to sepals at the stem end of green or ripe fruit (Fig. 1). Infected senescent petals adhering to leaves may also result in a leaf blight (Fig. 2). Abundant gray-brown, fluffy, fungal growth on infected tissue is responsible for the disease's name "gray mold".

Fruit infections may be noticeable on green fruits, however, they are most apparent on ripe fruit where abundant sporulation may develop (Fig. 3). Fruits touching the ground or in areas where poor air drainage does not allow for rapid drying are most likely to become rotted. When conditions are conducive to abundant blossom infection, the chance of a high level of fruit rot developing at harvest is increased.

## **CONTROL**

Botrytis fruit rot can be controlled by a combination

of cultural and chemical control measures. Proper weed control and spacings of 4 1/2 feet between row centers, 5-7 inches between plants within the fruiting matted row, and a 15-18 inch width of the row encourages good air drainage and prevents moisture buildup on berries. Application of fertilizer to strawberries should be made after harvest or in the fall of the year. Spring fertilization of fruiting beds results in vigorously growing plants that are more susceptible to Botrytis. Sprinkler irrigation used early in the day so foliage and fruit will dry prior to night fall will reduce wetting periods favorable to Botrytis infection.

Practices which promote good air drainage within the planting also favor maximum fungicide spray coverage. Spray programs for rot control should start at bloom and continue throughout the season. Since blossom infections greatly influence subsequent fruit rot, close attention to control at this time is necessary. When possible, sprayers that give the best coverage of all plant surfaces should be used. Sprays should also be applied to fruits as they near harvest, particularly during cool, wet periods. Research has shown that strawberry varieties differ in their susceptibility to Botrytis rot. See your local extension service for up to date control recommendations.

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