

## Plant Pathology Fact Sheet

# Raspberry Fruit Rots

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### Causes of Decay

Rainy summer and fall weather in Kentucky can provide ideal conditions for fruit decay diseases of raspberries. The most damaging are the fungal diseases gray mold (*Botrytis cinerea*) and soft rot, or leak (*Rhizopus* and *Mucor* spp.).

Both diseases are favored by long periods of wet fruit and foliage, and by high humidity levels. During some parts of the season, fruit rots account for up to 50% loss of potential harvest, and additional losses after harvest.

### Symptoms

Gray mold infections often occur during bloom, but symptoms are usually not observed until harvest. Following flower infection, the fungus remains inactive (latent) within the green fruit and as the fruit ripen, decay begins.

GRAY MOLD can be identified by the gray or tan dusty appearance of the spores on the rotted fruit surface. When these fruits are bumped, a cloud of gray spores can be seen drifting from the infected fruit. Spores moved by air currents and splashing water fall on other flowers or fruits and initiate new infections, or the fungus can simply attack adjacent abutting berries.



RHIZOPUS SOFT ROT (L) AND BOTRYTIS GRAY MOLD (R)

As the soft rot progresses, the shriveled decomposed fruit appears dark gray. The gray mold fungus can also attack senescing leaves and canes, providing a source of gray mold fungus for fruit infections.

RHIZOPUS SOFT ROT is first seen as fluffy white fungal growth on the fruit surface. The rotting fruits are soft and watery and may leak juice. Black specks of fungal fruiting bodies appear on the moldy growth. Eventually, the fungal growth turns black and the shriveled, decomposed fruit appears black and uneven.

The fungus can invade adjacent berries directly, or spores carried by air currents can germinate and initiate infections, primarily through wounds.

### **Disease Management**

There are several cultural practices that can aid in reducing losses due to fruit rot in current and future plantings.

1. Provide adequate spacing between plants and between rows to improve air circulation.
2. Prevent plants from bending over to the ground (where there is fungal inoculum and greater moisture) by tying or growing on a trellis.
3. Prune out nearby shading vegetation to speed up drying.
4. Discard well away from the crop area any harvested fruit showing the slightest amount of mold or decay.
5. Apply fungicides only if necessary. Commercial growers may apply fungicides at bloom for best control, with additional applications as needed. Fungicides containing active ingredients such as benomyl, captan, cyprodinil + fludioxonil, fenhexamid, or iprodione can be used to manage fruit rots. For current suggestions, see the *Midwest Commercial Small Fruit and Grape Spray Guide* available on the web at <http://www.hort.purdue.edu/hort/ext/sfg/>

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