

## Plant Pathology Fact Sheet

# Apple Fruit Diseases Appearing at Harvest

By John Hartman

Diseases of apple fruits appearing at harvest can cause significant losses in yield and quality. To know what control measures to take next year to prevent similar losses, it is important to recognize what is being observed. In some cases, growers will need to cut the fruit open to identify the problem.

Many of the diseases of apple fruit also attack other parts of the tree causing diseases of leaves, twigs, and branches. These tissues are sources of inoculum for the fruit diseases. Some of the apple fruit diseases also attack wild plants such as brambles and woodland species growing nearby. These native plants are also a source of inoculum for disease.

The following list briefly describes the most important fungus-caused diseases of apple fruits in Kentucky. For more complete descriptions, with helpful color pictures, growers are encouraged to refer to the *Compendium of Apple and Pear Diseases*, published by the American Phytopathological Society, 3340 Pilot Knob Road, St Paul, MN 55121. For disease management suggestions, consult UK Cooperative Extension spray guides.

## Apple scab

Look for gray or brown corky spots, uneven or deformed fruit, and cracked skin and flesh. Although apple fruit infections usually occur early in the season, pin point scab with rough, black, circular spots may develop in storage after harvest following late season infections.



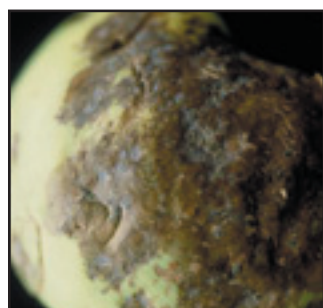
## Bitter rot

Usually, bitter rot infections produce slightly sunken, circular brown spots that may be surrounded by a red halo. When the spot becomes nearly an inch in diameter, spore-bearing structures appear in concentric circles on the diseased apple surface. The spore masses on the rotted fruit surface may take on a slight orange or pink color. A brown decay beneath the diseased

spot extends towards the fruit core in the shape of a cone.

### **Black rot**

On mature fruit, diseased spots, surrounded by a red halo, appear black (often with alternating concentric rings of black and brown) and are not sunken. The decay is firm and dark; the surface of diseased fruit may show scattered black specks which are the reproductive structures of the causal fungus.

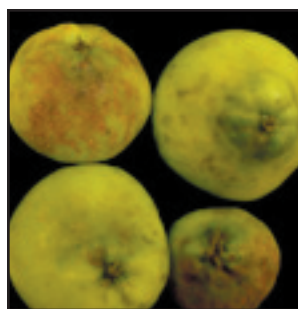
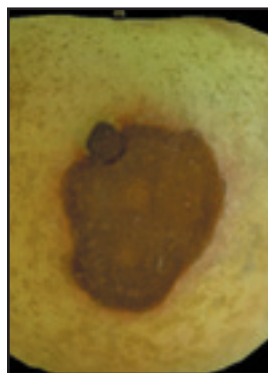


### **Blotch**

Dark, shiny raised blotches with irregular or lobed edges appear on the surface of fruit having this fungal disease.

### **Botryosphaeria rot (white rot)**

The disease first appears as sunken, circular, brown spots, often with a reddish or dark halo. Scattered clumps of fungal reproductive structures may appear on the surface. As the decay expands, the rotted area extends towards the core as a cylinder of affected tissue. This can be seen by splitting the fruit open. The decay is soft and watery, having a clear to light tan color under warm weather conditions.



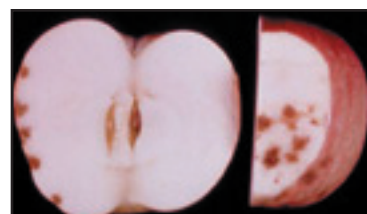
### **Cedar quince rust**

A large, dark green diseased area appears on the calyx end of the fruit, causing puckering and distortion. The brown, spongy

tissue beneath the affected skin may extend to the core.

### **Cork spot**

This problem is not caused by fungi, but by calcium deficiency. The



symptoms, small, circular, reddish or dark sunken spots with brown flesh beneath, are similar to some fungal diseases.



### **Powdery mildew**

The surface of the fruit may be covered with a network pattern of russetting (cork cells).

### **Sooty blotch and flyspeck**

Colonies of the sooty blotch fungus may appear on the fruit surface as circular to irregular areas of dark fungal growth having a sooty appearance. Flyspeck colonies appear as well-defined clusters of shiny, black superficial dots. These two fungi often appear on the surface of the same fruit.



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