

## Plant Pathology Fact Sheet

# Blackberry Rosette (Double Blossom)

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### Cause and Symptoms

Rosette disease, caused by the fungus *Cercospora rubi*, is a serious and destructive disease of blackberries in most parts of Kentucky. In some locations, growers have been forced out of growing blackberries because of rosette disease.

Blackberry growers inspecting for disease should be looking for flowers with distorted petals and enlarged sepals, giving the appearance of a double flower (hence double blossom). Unopened flowers are usually elongated and larger, coarser and redder than normal. In addition, shoots may appear abnormal with leafy proliferation (rosette) or witches broom. Berries do not develop from infected branches and other parts of the cane may produce only small, poor quality fruit. Thus, this loss of yield is of concern to growers.

### Disease Cycle

When the disease is established, the buds of new canes become infected from fungal spores produced on infected distorted flowers of old canes. These infected canes



BLACKBERRY ROSETTE FLOWER SYMPTOMS

then develop symptoms the following year. Blackberries can become infected from spores produced on wild blackberries nearby. Blackberry nursery stock can harbor the causal fungus in rooted plants, but not in root pieces, which are commonly sold for blackberry propagation. We recently demonstrated this in Kentucky by successfully growing disease-free blackberries from root pieces taken from infected plants while at the same time observing disease development on the same plant source transplanted as rooted plants.

### Disease Management

Select a site isolated from wild blackberries or other brambles. In many parts of Kentucky, this may be difficult. Use disease-

free nursery stock, roots only. If the disease appears and is not already severe, infected rosettes and blossom clusters should be removed and destroyed before they produce spores. Old canes should be removed and destroyed immediately after harvest. Remove and destroy wild blackberries and other brambles near the planting.

If the disease is serious, more drastic action may be needed. If available, the fungicide Benlate can be used up to 5 times in a season beginning at first bloom and extending through harvest. Some growers control this disease by harvesting blackberries in alternate years and destroying the above ground parts of both the new and old canes in spring every other year. Splitting the planting into two fields allows harvest every year with biennial cropping on each half.

Plant disease resistant blackberries. In Kentucky, we have observed rosette disease in the following blackberry cultivars:

HIGHLY SUSCEPTIBLE	TOLERANT, BUT STILL SUSCEPTIBLE
Cherokee	Chester
Cheyenne	Hull
Choctaw	Navaho
Comanche	
Illini Hardy	
Shawnee	

A research report on reactions of blackberry cultivars to rosette disease in Louisiana is presented below. The cultivars, arranged from most susceptible to most resistant are listed below:

CULTIVAR	% OF TOTAL PLANTS WITH ROSETTE	INFECTED PLANTS: AVERAGE % OF SHOOTS WITH ROSETTE PER PLANT
Shawnee	75	56
Rosborough	70	50
Choctaw	65	50
Brazos	60	44
Cheyenne	40	10
Arapaho	0	0
Humble	0	0
Navaho	0	0

(Revised 7-04)