Powdery mildew may affect numerous ornamentals, fruits, vegetables, and agronomic crops. In Kentucky, mildew diseases are most commonly observed on apple, begonia, crabapple, cherry, dogwood, lilac, phlox, pin oak, rose, sycamore, tuliptree, turfgrass, zinnia, squash, pumpkin, cantaloupe, wheat and barley.

Several different species of fungi can cause powdery mildew and most have a limited host range. As a result, infection of one species of plant does not necessarily mean that other nearby plants of another type are also threatened. Susceptible plants infected early in the season can be seriously damaged, while more tolerant plant species may show symptoms late in the season without being harmed significantly.

Symptoms and Signs
The presence of a white, tan or gray dusty mildew on infected plant parts makes this disease easy to diagnose. The fungus grows primarily on the plant surface and it is the mycelium and spores which account for the moldy appearance.

Later in the growing season, tiny black fungal fruiting structures may appear to “pepper” mildewed tissue. Powdery mildew may occur as isolated spots or cover entire leaves, stems, buds and flowers. Affected leaves may also be stunted, curled or twisted. In addition, powdery mildew may result in reduced yields.

Factors Favoring Disease Development
Powdery mildews are favored by cool nights followed by warm days. The disease is most common in shady areas, low spots that trap damp air, and sites where plants are crowded and air circulation is poor.

Disease Management
Cultural
Avoid planting in low areas. Keep plants well spaced and properly thinned to promote good air circulation. At the end of the growing
season remove and destroy diseased annuals and prune out the diseased portions of perennials.

**Resistant Varieties**
Powdery mildew resistant cultivars of crabapple, dogwood, lilac, some cucurbits and other plants are available and offer an excellent means of control.

**Fungicides**
Chemical control of powdery mildew is generally not necessary when the disease occurs late in the season. By that time the leaves have already served their usefulness for that growing season and will soon be senescing. Late season infections cause little permanent damage, even where the plant appears severely affected. When the disease occurs early in the season or when highly susceptible plants are infected, chemical sprays may be warranted.

Fungicides are most effective when applied immediately at the first signs of infection. Fungicides effective against powdery mildew may contain ingredients such as azoxystrobin, benomyl, fenarimol, kresoxymethyl, myclobutanil, propiconazole, triforine, thiophanate-methyl, triadimefon or trifloxystrobin. Read the chemical label to be sure the fungicide is cleared for use on the plant in question.

(Revised 8-04)