

## Erwinia Blight of Foliage Plants Indoors

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Bacterial blight and soft rot of foliage plants is caused by two closely related bacteria: *Erwinia chrysanthemi* and *E. carotovora*. Some of the most important foliage plants affected by *Erwinia* spp. are Aglaonema, philodendron, pothos, dracaena, and dieffenbachia. In production, losses can range from barely negligible to 100% depending upon the time of year, the crop affected and the type of market the product will find. In the interiorscape, Erwinia leaf spot or blight is less common since the dry, relatively cooler environment does not favor the disease. However, when infected plants are established indoors they can develop full-blown symptoms of Erwinia blight and eventually die.

Bacterial blight is typified by watery leaf spots with centers that fall out. These spots spread very rapidly to encompass an entire leaf. This is very common on *Philodendron selloum*. In fact it is difficult to find this plant without an active Erwinia infection. Infections start as tiny watery spots that grow until entire leaves are mushy and collapsing.

Stems can also be infected and become mushy and foul smelling and their leaves usually yellow quickly. On some plants, a blackened, wet, slimy spot generally starts at the soil line at the base of the plant and progresses into the upper portions of the plant. Rotted areas are usually watery and mushy and have a rotten fishy odor in many cases. Once you have been introduced to the Erwinia odor you can frequently diagnose a problem by smell alone. There are two drawbacks to using this method of diagnosis. The first is that another pathogen could be present as well as the Erwinia and best controls must take into account all of the pathogens involved. The second is the problem of convincing yourself to stick your nose close enough to confirm the odor.

The bacteria sometimes form a slimy, gelatinous mass at the base of infected cuttings. In other cases the bacterium is systemic and spreads within the conductive tissues of the plants. Plants wilt, collapse and often die. Due to production of macerating enzymes, infected plants become very mushy and disintegrate especially during the warmer months of the year.

Control of bacterial leaf spots or blights can be best accomplished through use of clean, very healthy plants and a watering system that either does not wet the foliage or allows it to dry quickly. Remove and destroy infected plants as soon as they are found. Keep watering to a minimum and avoid splashing since this can spread the bacteria to other plants. Irrigate early in the day to allow rapid drying of the foliage which reduces the ability of the bacterium to infect. Be sure to obtain an accurate diagnosis of the problem since several of the diseases caused by fungi appear similar to Erwinia blight. Use of bactericides on plants infected with *Erwinia* spp. is rarely effective and none are labeled for bacterial soft rot or leaf spot in the interiorscape.

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**The following steps should be followed to reduce losses from Erwinia diseases:**

1. Never use any plants with suspicious symptoms (mushy or wet rotted areas).
2. Use only new or sterilized pots and potting medium.
3. Avoid splashing water to minimize disease spread.
4. Check your plants frequently for symptoms and use your nose.
5. Remove all plants with symptoms of Erwinia diseases as soon as they are found.

Reference

Chase, A. R. 1997. Foliage Plant Diseases - Diagnosis and Control. APS Press, St. Paul, MN 55121-2097. 169 pp.

Table 1. Plants commonly affected by Erwinia infections in the interiorscape.

Aglaonema	Dracaena
Alocasia	Philodendron
Anthurium	Pothos
Bromeliads	Sansevieria
Cacti	Succulents
Cordyline	Syngonium
Dieffenbachia	