The Plant Doctor's LANDSCAPE TIPS

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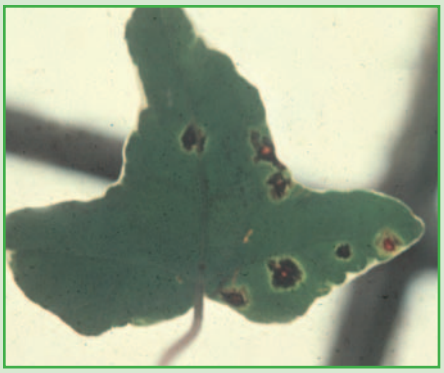

Photo 1: Typical Bacterial Leaf Spot on English Ivy, caused by a *Xanthomonas* bacterium. Note yellow margin on leaf lesion.

Photo 2: Severe infections may cause loss of large established vines due to destruction of foliage and stems. This plant is the sole survivor from a rather large bed of English Ivy that began receiving frequent irrigation.

Photo 3: Large areas of the English Ivy in this landscape (same as Photo 2) have been destroyed by *Xanthomonas* bacterial leaf spot. The primary reason for the destruction of English Ivy by the disease was excess and frequent irrigation, so much irrigation that the tree was even killed.

ENGLISH IVY: BACTERIAL LEAF SPOT

INTRODUCTION:

English Ivy (Hedera helix) is a very common vine and ground cover used widely in landscapes throughout North America and Europe. Aggressive and rapidly spreading, English Ivy provides an alternative to lawn grasses and other landscape plants where ground covers are desired. This popular vine has some virtues that include low maintenance and very few disease and pest problems under low maintenance cultural practices.

Because English Ivy is so commonly utilized in landscapes, inquiries are frequently received about dieback. Bacterial leaf spot, caused by the bacterium *Xanthomonas campestris pv. Hederae* can be a serious disease of English ivy . . . so serious in fact that the disease may be the limiting factor in the establishment and cultivation of the plant.

DIAGNOSIS AND DISEASE CYCLE:

Xanthomonas bacterial cells infect leaves of English Ivy during periods when the leaves are wet. After infection, lesions on the foliage develop, first appearing as small dark green water-soaked (oily) spots. These spots gradually enlarge in circular to angular areas frequently measuring approximately 3-8mm (Photo 1). When mature, these spots may exhibit a yellow border. If infection is severe, the spots may coalesce and blight large areas of the leaf. Under such severe infections, stems may develop numerous lesions that may kill vines and hence, large areas of English Ivy (Photo 2 and 3). Bacterial cells may be released from these lesions anytime the foliage becomes wet; the cycle of infection may be repeated many times over the warm season. *Xanthomonas* survives overwinter in these lesions and in plant debris and soil.

Xanthomonas Leaf Spot on English Ivy is the most common and serious problem on English Ivy, however, it may be confused with several fungal-incited leaf spots. The disease may also be confused with winter-injury/desiccation, which turns vines pale green to brown, virtually appearing dead. Winter-desiccated English Ivy will usually recover in the spring.

BACTERIAL SPOT MANAGEMENT

Most serious cases of bacterial leaf spot develop on English Ivy that receives frequent irrigation. The disease can be managed almost exclusively by either minimizing irrigation or by eliminating irrigation. Mature, established English Ivy can thrive just fine on normal rainfall. During drought, irrigation can be applied in the mornings so that vines dry off quickly, minimizing the chances of *Xanthomonas* spread and infection.

With low disease incidence, infected leaves can simply be picked off during dry periods and destroyed. Large sections of infected vines can also be eliminated. Because *Xanthomonas* is a bacterium, common chemical "fungicides" are not effective in managing this leaf spot on English Ivy.

For more information, please feel free to email me at robertsd@msu.edu or contact a professional plant health care provider. The author, MSU or MGIA do not endorse any particular products. If using pesticides, be sure to read and follow label directions.

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