

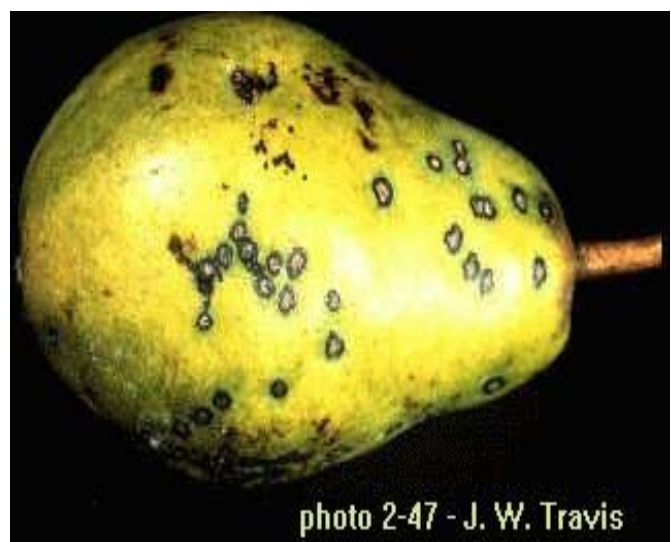
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## Fabraea Leaf Spot

### *Fabraea maculata*

**I. Introduction:** Susceptible pear cultivars affected by *Fabraea* leaf spot often are defoliated by midsummer, resulting in dwarfing of fruit and reduction of fruit buds. Infected fruit is worthless since it is usually cracked, disfigured, or misshapen. In the nursery, early defoliation and twig infection result in stunted growth of trees.

**II. Symptoms:** Leaf spot can be found on petioles, leaves, shoots and fruits. Initial lesions on leaves are tiny, round, purplish-black spots, which quickly enlarge to 1/8 to 1/4 inch in diameter and usually have a blackish-brown center (photo 2-46). Spots coalesce and severely infected leaves fall to the ground prematurely. A small black acervulus may develop in the center of each lesion, from which conidia ooze in a creamy, white mass in wet weather. Fruit lesions (photo 2-47) are larger than those on leaves and cause the fruit to crack and drop. Lesions on current season's shoots may be observed as small inconspicuous, purplish-black spots. Some lesions develop into superficial cankers, but most are walled-off during the next growing season, so that cankers rarely persist in two-year-old wood.



**III. Disease Cycle:** The four-celled conidia (*Entomosporium maculatum*), with a distinctive insect-like appearance, are spread mainly from overwintering leaf litter, and some from twig cankers, by splashing water from rains or overhead irrigation. Wetting periods for infection may vary from 8 to 12 hours at temperatures of 50 to 77 F (10-25 C). Lesions begin to appear about 7 days after the beginning of an infection period. The disease may advance rapidly in late summer as wind and rain distribute the conidia throughout the tree. Susceptibility of leaves and fruit to infection does not decrease with maturity. Nearly all pears of European descent are susceptible to this leaf spot.

**IV. Monitoring:** At midseason, examine 20 of the lowest leaves on each sample tree for earliest symptoms (photo 2-46). One to ten infections and greater than ten infections per 20 leaves represents moderate and high risk, respectively.

**V. Management:** This disease is controlled with applications of protectant fungicides. The timing and number of applications varies depending upon the source and availability of primary inoculum, which varies among regions of the eastern U.S. Early-season spray programs for pear scab should also control early-season leaf spot infections. Where ascospores and conidia of the fungus occur after petal fall, summer fungicide treatments are needed. In the northeastern U.S., fungicide applications in June and July will generally control Fabraea leaf spot, but mid-August and September applications are needed in wet seasons on late-maturing cultivars such as Bosc.

**TEXT PREPARED BY T. VAN DER ZWET AND A. R. BIGGS**

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