



## PLANT DISEASES

### PURPLE SPOT AND STEMPHYLIUM LEAF SPOT OF ASPARAGUS

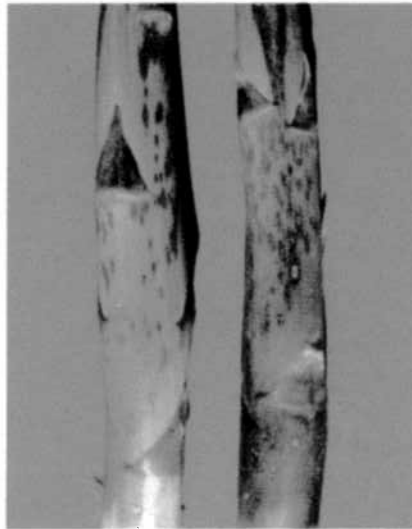
A fungus, *Stemphylium vesicarium*, causes the disease called purple spot on asparagus spears. Symptoms consist of elliptical, slightly sunken lesions or spots  $\frac{1}{32}$  to  $\frac{1}{16}$ -inch across, and up to  $\frac{1}{8}$ -inch long. Spots often occur on only one side of the spear. Lesions or spots are purple, or brown in the center (especially larger lesions) with a purple margin. Although purple spot does not affect the internal tissue of the spear, infected spears are frequently rejected from fresh market sales.

The fungus also infects the asparagus fern. At that stage, the disease is called Stemphylium leaf spot. On the fern, the disease appears as tan to brown lesions from  $\frac{1}{8}$ - to  $\frac{1}{2}$ -inch in length with dark purple margins. Needles will drop when infections are severe.

Moisture from rain, dew, or sprinkler irrigation triggers conditions which encourage infection. Therefore, the disease is most prevalent on spears following cool, wet, spring weather. Dry weather during the harvest season checks disease development.

The fungus enters the plant through breathing pores called stomata and through wounds such as those caused by blowing sand. In controlled experiments, infections are more numerous on wounded plants. Wounds produced by blowing sand serve as points of infection for up to 48 hours after injury.

The fungus survives the winter in infected debris from the previous season's crop. Purple spot is more



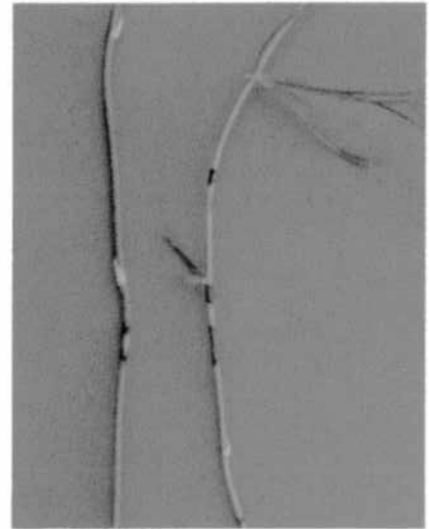
**Stemphylium purple spot appears on asparagus spears just before harvest.**

prevalent when summer fern growth remains on the soil surface at harvest.

#### Control

Destroying overwintering sources of inoculum such as infected ferns and plant debris will reduce disease incidence on spears the following spring. Burn or completely bury infected ferns by cultivation in late fall to reduce inoculum levels and subsequent infections. This practice is especially important in fields where purple spot has been a problem, or where heavy infections occurred on the fern the previous summer.

Be careful not to damage spear tissue or reduce cover and wind barriers that keep sand from blowing



**On ferns, the fungus causes Stemphylium leaf spot.**

across the field. Infections readily occur through wounds. Also avoid wounding crowns, since damage sites provide avenues for infection by the *Fusarium* fungi.

Applying fungicides to spears is not a satisfactory method for control of purple spot. Chemicals applied near harvest leave a residue. Protection for all plant surfaces is impractical, because new spears emerge daily.