

Black Pox

Helminthosporium papulosum

I. Introduction. Black pox is a minor fungal disease which can affect apple bark, fruit, and foliage. The disease is more common from southern Virginia southward than in the northern mid-Atlantic region. The same fungus causes blister canker on pear.

II. Symptoms. Infection first appears on current season twigs as well-defined, conical, shiny black lesions which enlarge by the end of the first season. Extensive secondary lesion enlargement may girdle small, heavily infected twigs. Smoothbarked twigs remain susceptible for several years and twig infection is cumulative throughout this period. Twig symptoms may be confused with the nutritional disorders measles and internal bark necrosis. Fruit lesions are small, black, circular and slightly sunken (photo 2-44). Leaf lesions begin as red halos with light green centers, and become tan to brown with purple borders. Severe leaf infection may cause defoliation. Differences in cultivar susceptibility have been noted, with 'Rome Beauty' and 'Grimes Golden' being more susceptible than 'Yellow Transparent' and 'York Imperial'.

III. Disease Cycle. This wet weather fungus overwinters and produces conidia in old bark lesions. The optimum temperature for growth is 82F (28C). Leaf infections may become evident in midsummer, and fruit and stem lesions slightly later. The incubation period is three to six months on fruit and three to ten months on bark. If fruit is harvested relatively early in the season, infection may occur after the last preharvest fungicide application, allowing spread of the disease to unprotected new growth and new trees.

IV. Monitoring. Beginning in the dormant season, look for bark lesions on ten shoots per tree in blocks where this minor disease has been a problem. Record the number of shoots with lesions. At midseason, black pox infection may occur during warm wetting periods. Monitor for leaf and fruit (photo 2-44) infections which may appear in problem areas by



photo 2-44 - A. B. Groves

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V. Management. Disease-free planting stock is important to help prevent spread of the disease. Most fungicides used in the cover sprays at 14-day intervals for summer diseases will control black pox. On early-maturing apple cultivars, postharvest sprays may be needed to reduce the buildup of the disease on leaves and twigs after harvest.

TEXT PREPARED BY K.S. YODER

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