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ABSTRACTS

POWELL, C.C. 1990. **Fungicides: an overview.** Am. Nurseryman 171(6):61-70.

Hundreds of infectious diseases can threaten the health of today's landscape plants. However, many will yield to fungicidal sprays. Most of the effective fungicides available today will work—if they are combined with good plant care practices and an environment manipulated to curb pathogen-favoring conditions. Fungicides work best as a preventive measure. Their effectiveness depends on treating your crop before a pathogen strikes and you see actual damage. Preventive fungicide treatments can help control the diseases leading to damping off and root or crown rot. Many products prevent diseases caused by water molds. The fungicides now available to combat powdery mildews are extremely effective. Fungicides can adequately control rust if they are applied before the disease strikes. Mancozeb remains the best general fungicide available for the many miscellaneous leaf spots that occur in the nursery and landscape. Preventive spray programs properly managed are the secret to successful disease management.

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Fungicides can be divided into two groups. Contact fungicides coat plant surfaces, providing a barrier against disease-causing fungi. Systemic fungicides also act as surface barriers, but have the added advantage of being absorbed by plants. The major problem with systemic fungicides is the development of fungal resistance. To understand fungicide resistance, we must understand the concept of population. Because systemic fungicides usually poison fungi at a single point in their growth and development, it is likely that some individuals in a population will be unaffected by the fungicide. When the same fungicide is used repeatedly and exclusively, these resistant individuals will increase in number until most of the population is resistant, and disease control fails.