Part III

Plant Diseases and Their Pathogens

Because this is a reference book and not one to be read for pleasure or continuity, most of you will come to the material you need in this section by way of the index or the lists of diseases given under the different hosts in ▶ Part IV. At the beginning of ▶ Part IV you will find a list of headings under which diseases are grouped and described, from Anthracnose to Witchweed. In the Host section, ▶ Part IV, the key word, for example, rot or blight, is given in capital and small capitals, followed by the name of the pathogen (agent causing disease) in boldface. In this Diseases section, Chap. 3, the pathogens are listed in boldface in alphabetical order under each heading such as ROTS or BLIGHTS and so on, followed by the common name of the disease. This system was adopted for quick and easy reference because trying to alphabetize hundreds of similar common names would lead to endless confusion. Also, it allows a very brief summary of the classification and diagnostic characters of each genus before going on to a consideration of diseases caused by the various species. This brief summary is in small type, so that it can be readily skipped by readers uninterested in the technical details. Perhaps I am the only one who feels the need for this quick review, to be used in conjunction with the classification given in ▶ Part II; perhaps others who have to answer questions over a broad field instead of their own specialty can make use of these capsules sandwiched in between nontechnical descriptions.

An alphabetical arrangement has the great disadvantage of being thrown out of alignment every time the name of a fungus is changed, as it so frequently is. In some such cases the old name is retained to avoid change in order, but the present accepted name is also given. Sometimes names have been changed under several hosts and the old name inadvertently retained under others. And sometimes the old name is purposely retained because it is so familiar to everyone. This is particularly true of a few fungi far better known by their anamorph states than by the correct name of the teleomorph state. A fungus not only can have several names; it also can cause more than one type of disease. For instance, *Pellicularia filamentosa* is the present name of the fungus formerly known as *Corticium vagum* when causing Rhizoctonia rot of potatoes and *Corticium microsclerotia* when causing web blight of beans. As *Rhizoctonia solani*, the name given to the sclerotial stage, the same

fungus causes damping-off of seedlings, root rots of many plants, and brown patch of lawn grasses. There are lots of plant diseases, and there are lots of fungi causing them, but there are not nearly as many separate pathogenic organisms as all the names would indicate. Thus, a Linkage Reference guides the user to two or more common disease sites, i.e. "Canker" or "Blight", where the user searches for the pathogen alphabetically or the link may guide the user directly to a pathogen in another chapter or section.

I cannot think of anything more deadly than ploughing straight through this section from Anthracnose to Wilts. By doctor's orders, take it in small doses, as needed. But do read the few introductory remarks as you look up each group, and please, please, before starting any control measures, read the opening remarks in ▶ Part I on Garden Chemicals, and look up, in the list of chemicals, any material you propose to use, noting precautions to be taken along the lines of compatibility, weather relations, and phytotoxicity. Although the disease descriptions, fungus life cycles, and general principles of control given here will remain fairly valid, it must be stressed that chemicals suggested for control are constantly changing. Today's discovery may be obsolete tomorrow. This *Plant Disease Handbook* should, therefore, be used in conjunction with the latest advice from your own county agent or experiment station. Addresses of the state agricultural experiment stations are given following ▶ Part IV.