R. Kenneth Horst

# Field Manual of Diseases on Garden and Greenhouse Flowers



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### **Preface**

The information in this manual is taken in large part from the records of the Plant Disease Survey as given in the *Plant Disease Reporter*, *Plant Disease*, and from the *Index of Plant Diseases in the United States*, *Agriculture Handbook 165*, U.S. Department of Agriculture. There are a great many records that bring in new reports every day, and any such list is out of date by the time it is published, and is sure to be far from complete. This check list is offered as a helpful guide, a foundation on which to build. It is by no means the last word.

Hosts are listed alphabetically by common names except where the scientific names mean less confusion. The diseases are those mostly reported from North, Central, and South America.

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## Part I



Plate 1 Tulip Break on Tulip caused by Lily Latent Mosaic Virus

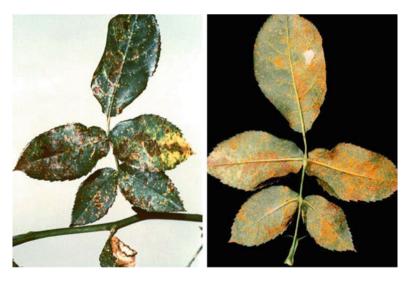


Plate 2 Rust on Rose caused by Phragmidium mucronatum



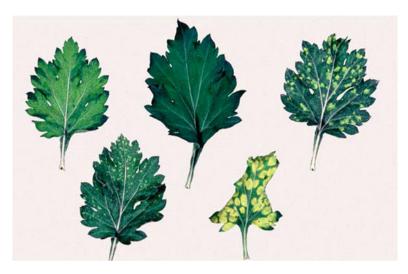
 ${\bf Plate~3~Stunt~on~Chrysanthemum~caused~by~Chrysanthemum~Stunt~Viroid.~Var.~Dark~Pink~Orchard~Queen}$ 



Plate 4 Green Flowers on Chrysanthemum caused by Aster Yellows Phytoplasma



Plate 5 Mosaic on Rose caused by Prunus Necrotic Ringspot Virus



**Plate 6** Foliar Symptoms on Chrysanthemum (Variety Bonnie Jean) caused by (clockwise from upper left) Chrysanthemum Chlorotic Mottle Viroid, Healthy Leaf, Potato Spindle Tuber Viroid, Chrysanthemum Stunt Viroid, and Potato Spindle Tuber Viroid (Mild Strain)



Plate 7 Bacterial Leaf Rot on Philodendron caused by Erwinia chrysanthemi



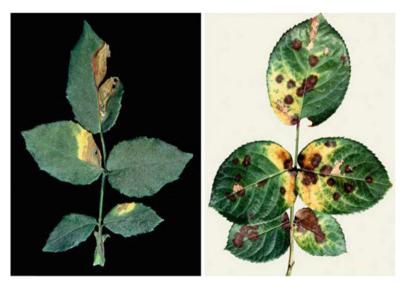
Plate 8 Crown Gall on Chrysanthemum caused by Agrobacterium tumefaciens



Plate 9 Powdery Mildew on Rose caused by Podosphaera pannosa

**Plate 10** Powdery Mildew on Begonia caused by *Erysiphe cichoracearum* 





**Plate 11** Copper Injury on Rose caused by sprays containing Copper. Blackspot on Rose caused by *Diplocarpon rosae*