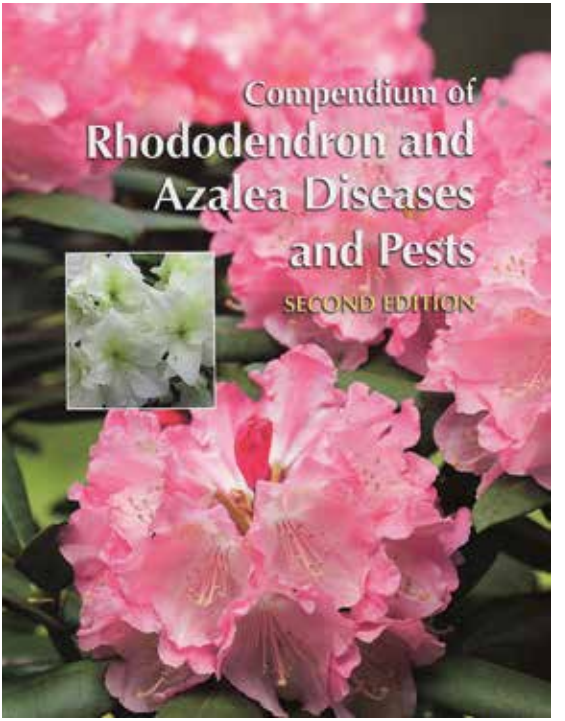
Book Review

Compendium of Rhododendron & Azalea Diseases & Pests, 2nd Edition

Linderman, Robert G., Ed., and D. Michael Benson, Ed. Published by the American Phytopathological Society. 144 pages, 173 colour illustrations. Paperback. $79 at the ARSStore: http://arsstore.org

Review by Steve Henning



The American Phytopathological Society (APS) released a major update on July 1, 2014, of their 1986 book *Compendium of Rhododendron and Azalea Diseases and Pests*, a venerable reference.

What makes this book even more special to ARS members is that APS is offering a $20 discount for orders through ARSStore.org, the American Rhododendron Society's online store.

Besides covering more diseases and pests, the 2nd edition covers new work completed in the past 28 years on the understanding and identification of new rhododendron and azalea problems.

Disease and Pest Identification

A total of 173 color photos assist in identifying the damage as well as the cause. This new edition has twice as many color photos and they are located with the appropriate text. Before they were relegated to a *Color Plates* section. With 144 pages, the 2nd edition also has twice as many pages.

It covers specific algal diseases, bacterial diseases, fungal diseases, nematodes, parasites, virus diseases, witches-brooms, weevils, borers, scale, aphids, mealybugs, whiteflies, lace

bugs, midge, rootworms, thrips, mites, caterpillars, cutworms, and leafminers. It also covers problems caused by moisture stress, heat, winter weather, nutrient deficiencies and toxicities, air pollution, pesticides and genetic problems.

Not only is the book complete, but it provides an identification key to identifying specific issues, including cultural problems, disease problems, and pest problems. What I find amazing is that this key that guides you to all specific problems, the Quick Guide to Diagnosis, fits on one page. That is remarkable. It does not list lichens, although many people mistake these harmless organisms for a problem.

Also, the book covers the latest control measures, which have changed and improved in the past 28 years.

Disease and Pest Control

One very interesting point I had never read before is that conifer-bark media, often used in nurseries, is highly conducive to disease. However, compost made from woody materials and organic nitrogen, as well as the tea made from this compost, greatly increases the resistance of the media to disease organisms. The book also discusses biological controls such as beneficial nematodes, beneficial bacteria such as BT, and other microbacterial agents.

The greatest value of this book to me is that it provides ways that I can avoid problems, rather than react to them. I attempt to avoid all toxic materials and this book gives me great insights on ways to do this. For example, it documented how just the use of a raised bed prevented root rot even when the raised bed was inoculated with phytophthora.

The book is written by scientists and does use correct biological terms, but its glossary should help with words that are new. One word I had to look up was abiotic, which means cultural, i.e., not caused by a biological organism.

When the book recommends chemical control, the chemical names are used rather than brand names. One chart lists insects and mites and their geographic distribution and the damage they cause. Another chart lists various insecticides and miticides and lists which pests they can be used for and whether they act by contact, stomach poison, or if systemic, whether they enter through the roots or the foliage. A third chart lists how effective the various insecticides and miticides are against each pest.

Disease and Pest Management

The book mentions ways to prevent problems including integrated pest management techniques. These include treatment of irrigation water, chemical control, biological control, soil selection, fertilization, cultural practices, sanitation, and resistant varieties. For example, the use of organic or nitrate fertilizers offer distinct advantages over ammonia fertilizers. It also discusses exclusion, eradication, and quarantine regulations used around the world.

The book discusses the association of mycorrhizae with plant nutrition and disease prevention. This means there is a tradeoff between sterile media and media enhanced with beneficial organisms. In scientific studies, mycorrhizae were even found to some extent on all rhododendron and azaleas, even on plants raised in the super-sterile environment of tissue culture. Higher acidity tends to reduce some disease problems and enhances the performance of mycorrhizae.

If I have any criticisms of this book, they are 1) that it doesn't treat deer as a pest, but there are complete books that deal with deer, and 2) that it doesn't have as many lists of susceptible and tolerant or resistant plants as I would like. However, it does mention some varieties related to ozone damage, cold tolerance, ringspot virus, dieback, gall, root rot, leaf spot, rust, powdery mildew, nematodes, blights, and thrips.

Is This Book For You?

This book will prove invaluable to nurseries and major gardens where they need a reference their employees can use to diagnose, solve, and prevent problems. It will also be of great importance to "rhodoholics" who have a great deal invested in their passion.

In conclusion, the new APS compendium delivers. It helps identify problems, their treatment, and how to prevent these problems. Since it is very complete, it may have more details than the casual reader can digest. However, for those that need the facts, this book is for you. This new 2nd edition is long overdue.

$20 off at ARSStore.org

The publisher of the book has worked out a deal with ARSStore.org where you can get it for $79, $20 off the regular price. Click on the link at http://arsstore.org.

[For those looking for something simple and inexpensive, Washington State Univ. Ext. service has Bulletin 1229, "How to Identify Rhododendron and Azalea Problems" for $6 or on-line for free. As the name indicates, this 28-page 1994 WSU bulletin only covers identification of some problems and not the treatment, and prevention. It does not have a key to identifying problems, but it does have a list of plant varieties resistant to weevils.]

Steve Henning

Steve Henning, a member in the Valley Forge Chapter of the American Rhododendron Society since 1972, is the webmaster of Henning's Rhododendron & Azalea Pages, the District 8 ARS Director, and volunteers as manager of www.ARSStore.org, which he created.