

GROWING KNOWLEDGE

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Handier handbooks

BY JAY W. PSCHIEDT

WHAT'S IN YOUR bookshelf? Maybe an old *PNW Insect Management Handbook*?

Look closer. Does your handbook have a monochrome cover? Full-color covers were introduced in 2006 (Figure 1).

We started with a three-ring punch version in 2010. Maybe your issue is called the *PNW Plant Disease "Control" Handbook*? The title was changed to "Management" in 2000. All three books, *Insect*, *Weed* and *Plant Disease*, are updated at least annually.

In short, it might be time for you to get a new copy.

Why do we update the handbooks? Editors constantly scour the literature for the latest research to incorporate into them. In the last six years, the *PNW Plant Disease Management Handbook* has averaged 31 new sections and 72 re-writes every year. I don't just mean we changed a misspelled word or two, or put in the latest registered pesticide. Re-written sections have added significant advancements in understanding or control.

Some sections are added and then updated almost every year. For example, it seems like there is something new on boxwood blight every few months. These include new sightings in Seattle, Portland and Coos Bay; cultivar susceptibility (*Buxus sinica* var. *insularis* 'Nana' and *B. microphylla* var. *japonica* 'Green Beauty' are tolerant); fungicide registrations (Mural and Orkestra were added in 2017); and even timing of likely infection periods (fall as well as spring).

The companion website to the handbooks — pnwhandbooks.org — was updated in 2016 to make it more mobile



Figure 1. The PNW Pest Management handbooks.

friendly and for users to be able to search all three handbooks at once.

In print and online

The *Plant Disease* website — pnwhandbooks.org/plantdisease — still has color images and links to other websites of interest. For example, one of the boxwood blight links takes you to a pest management site that can monitor infection periods near your nursery.

For example, did you hear about the Purple Needle Eater? Me neither, at least not until Chal Landgren and Gary Chastagner wrote up a section on this new needle disease of true firs. Also called *Delphinella* shoot blight, it is a fungal problem in Christmas tree, bough and forest stands. Damage often is more pronounced on the north side of trees and in areas with tightly spaced firs with

poor air circulation. Prolonged moist conditions and/or high humidity during bud break favors disease development. Currently known fir host species include noble, Fraser, sub-alpine, corkbark, Greek, Spanish, Siberian, White, Turkish, balsam and European silver fir.

Pathologists in the region have written about many different subjects that can be leveraged into the *Plant Disease Management Handbook*. Rose diseases, *Azalea* and *Rhododendron* problems, *Verticillium* wilt, fluorine toxicity in plants, and treating irrigation water to eliminate water molds are among the various topics, sections and articles recently added or re-written.

Acting on growers' concerns

Walking the Farwest Show last summer, I learned a lot about the



Figure 2. Brown necrotic roots caused by *Pythium* sp. on *Penstemon*.
PHOTO COURTESY OF THE OSU PLANT CLINIC (2014)

troubles growers are facing today. Chief among them was root rot of native plants. New sections on California poppy wilt, *Hydrangea* root rot, *Kinnikinnick* *Phytophthora* dieback, lavender root rot, *Penstemon* root rot (Figure 2), rosemary root rot, and *Skimmia* crown and root rot were added as a result. A new article on *Pythium* seed rot, damping off and root rot was also recently added with a focus on greenhouse crops.

Updates are sometimes driven by demand. I monitor the sections most frequently called up on our website. The top-rated problems in the past have been apple scab, tomato blights and rose diseases. However, in this age of Google, I found the most accessed section was *Prunus laurocerasus* leaf spots and shothole. As a result, I edited and researched the topic



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more intensively. Last year, I found information on a new cultivar, 'Chestnut Hill', which is much more resistant than 'Otto Luyken'. Perhaps that variety is something we should grow more of here in the Pacific Northwest?

Did you know there is a new rust in Oregon? Pear trellis rust (*Gymnosporangium sabiniae*) appeared last fall on Bartlett pear (Figure 3). The alternate host is juniper, causing swelling and needle loss on branches. This fungus is in the same rust family as cedar apple rust, which is not present in the Pacific Northwest, or Pacific Coast pear rust, which has a major impact on *Amelanchier* production. Will this new rust have an impact on our production of juniper? Until research can be done, being aware of the new disease is important.

Are you keeping up with the latest on cedar branch canker? This problem has been observed in landscapes from Portland to Cottage Grove, Oregon.

First observed in the 1990s, it became more widespread in the 2010s. The fungus *Phaeobotryon cupressi* was shown to be able to cause branch dieback symptoms. In addition, a *Diplodia* sp. and a



Figure 3. Acorn-shape aecia of *Gymnosporangium sabiniae* (pear trellis rust) form on the lower leaf surface of pear leaves in the fall. PHOTO COURTESY OF NEIL BELL (2016)

Seiridium sp. have also been found in association with branch cankers on limbs that have died back. These fungi may be responsible for similar symptoms.

A couple of years ago, the Maple Society asked me to speak on maple diseases. I took the opportunity to scour our OSU Plant Clinic records to see what kind of maple samples (landscape and nursery) have come in over the last 50 years. Usually half a dozen diseases dominate the diagnoses. In this case, I found it unusual that almost 80 percent had something to do with *Verticillium* wilt. We know other diseases, such as bacterial blight, can become a bigger problem when co-infected with *Verticillium*. The result of this search was the addition of four new maple sections and a re-write of most all the others.

Future updates

New people are also a great source of new information. With the help of Alec Kowalewski, lawn and turf sections have been updated. Two new diseases have been added: brown ring patch (*Waitea* patch) and rapid blight.

Certainly, there is the mundane of odds and ends of leaf spots on numerous crops. You may not have a problem with them now but it could be in your future. Our job is to have the answers to your questions before you even ask them!

What's in your wallet? Maybe not much if you purchase any or all of these \$60 books every year. The online versions are free for now, and they have color images to help you diagnose your problems, plus links to additional information and up-to-date management information from organic to conventional products and tactics.

If you can't find a problem you're seeing in your operation, let me know and I'll get it added to the next edition. ☺

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