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Final report to the Elvenia J. Slosson Endowment Fund for work performed from July 1, 2005 – June 30, 2006

Title: Expansion of a web-based guide for garden and landscape pests

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INTRODUCTION

More than two years ago, the UC IPM program began creating a comprehensive internet database of garden and landscape pests based on the UC Guide to Solving Garden and Landscape Problems CD-ROM released in 2000. This web project allowed us update the information on the CD-ROM and reformat it so that users could easily access pest identification and management information starting from the host plant. Making this resource available on the web allows us to keep the management information current as well as link to new pests, Pest Notes, or new additions to the Natural Enemies gallery when needed. More than 1000 pages were added to the UC IPM web site, including pests and disorders on more than 100 plant species. We are currently continuing to expand this database to include many more pest problems on more than 100 new host plants. View the database on the UC IPM web site at www.ipm.ucdavis.edu/PMG/menu.homegarden.html.

GOALS / OBJECTIVES

The goal of this project was to expand the current database of pest management information in gardens and landscapes on the UC IPM web site. The first objective was to review the current host plant and pest pages and add new management information, illustrations, and photographs where needed. Our second objective was to add new pest problems on additional woody ornamentals and flowering bedding plants.

DISCUSSION

Updating current pest and pesticide pages

We took a look at the current pest pages that were originally converted to the web from the UC Guide CD-ROM. We reviewed approximately 770 screens covering invertebrate, disease, and environmental disorders on nearly 120 ornamental, vegetable, and fruit tree host plants. Many of these screens needed updating. We added new photographs to many invertebrate and disease screens. We rewrote management sections for several pest and disorder screens to remove outdated information where necessary and to make sure other recommendations were still appropriate. When we first converted the UC Guide screens to the web, we deleted references to outdated management practices such as the use of diazinon and chlorpyrifos to control various pest problems. However, on a more thorough review, we removed references to other materials such as malathion, captan, and carbaryl baits, and added new screens for safer products such as spinosad, imidacloprid, and myclobutanil. In addition, all other pesticide screens were revised and reviewed by the UC Statewide Pesticide Coordinator. We linked the new plant species/pest list pages to Pest Notes where available so that users could get more in-depth information on various topics. We also created numerous links from the invertebrate screens to the natural enemies gallery.

Reviewing menu screens

We revised the current host plant menu screens to include a few new pests for which we could link to Pest Notes. We also created a few new pest screens (Figure 1) where we felt that the current screen was not adequate. For each of the vegetable and fruit tree menus, we added a cultural tips section. Although the cultural tips were part of the original CD-ROM, most screens were completely reformatted with a new look and updated information (Figure 2).

Incorporating the garden and landscape database into the UC IPM Web Site

In early October 2006, the UC IPM web site got a new look when the addition of the garden and landscape database was finally revealed to the public. For the first time, users can access garden pest management information by choosing their plant species to get a list of pests on that host. From the home page (www.ipm.ucdavis.edu), users can click on “Homes, gardens, landscapes, and turf” to access pest problems on various host plants (Figure 3). Users can still go directly to Pest Notes if they know what pest they are looking for. They can also find pests not covered in the Pest Notes series, but covered in the new garden and landscape database, by using the new search feature.

Adding new host plants and pests

Moving into the second phase of this project, we now have reviewed the pest tables in the second edition of *Pests of Landscape Trees and Shrubs* and have identified host plants and pests not covered in the garden and landscape database that went online in October 2006. Approximately 120 new ornamental host plants will be added to the current database. Each host plant screen will follow the same format as the current screens including information on identification characteristics and optimum conditions for growth. Each plant screen will link to key pests and disorders. Many of the pests and

disorders will link to Pest Notes or to current pest pages. However, we will be developing screens for approximately 50 new pests and disorders including additional pages on identification, life cycles, and management where appropriate.

Continuing work

We are committed to seeing this project through to the end and maintaining it for years to come. The current database on the web is the result of tremendous amount of effort on the part of many within the UC IPM program. It took much more time than expected to convert the original CD-ROM to our web site and then have all the screens reviewed, revised, and reformatted. However, we are very pleased with the result. We are working very hard to get the expansion completed. Once we add the new ornamental host plants and associated pests, we will add an annual flower section, including some of the host plants and pest species from the *IPM for Floriculture and Nurseries* book.

Expected results

The current web-based guide for garden and landscape pests was unveiled in early October at the California Statewide Master Gardener Conference in San Jose and was met with great enthusiasm by those in attendance. Master Gardeners and others working in urban settings have long waited for a way to seek out pest information by host plant. This new format will make pest diagnosis much more efficient. Once we add the remaining plant species and additional pests, all of the major pest problems on the most common plants in California gardens and landscapes will be covered. We expect that this database will help users make more environmentally sound decisions when choosing management practices.

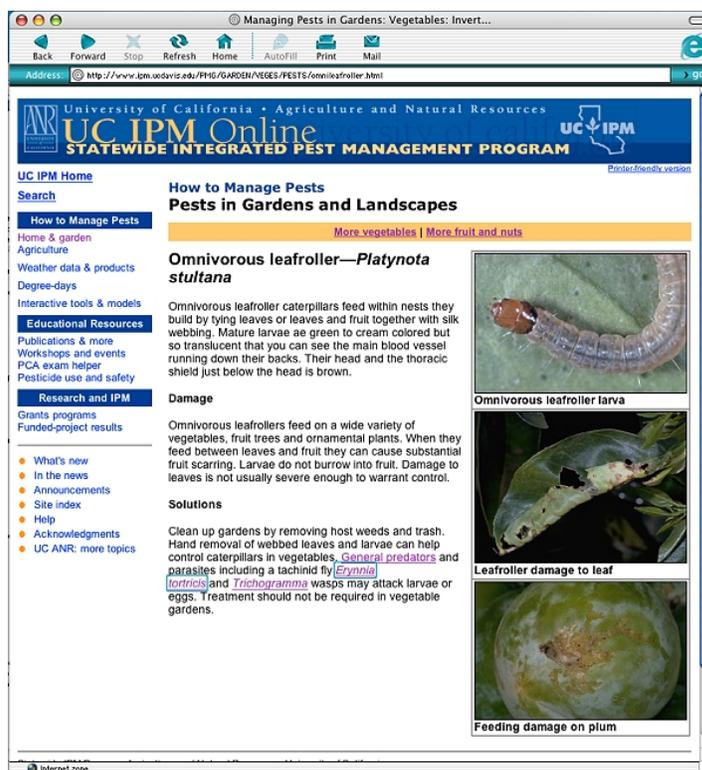


Figure 1. One of a few new screens created for the new web-based guide for garden and landscape plants.



Figure 2. Planting tips for beans.

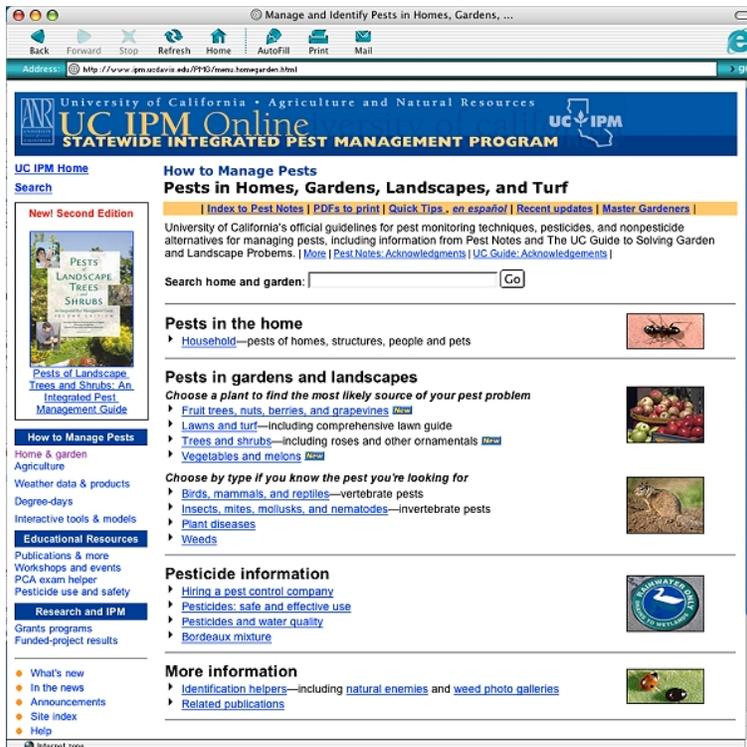


Figure 3. A new look for the home, garden, and landscape section of the UC IPM web site.