

Integrated pest management in ornamentals information kit

Reprint – information current in 2000



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This publication has been reprinted as a digital book without any changes to the content published in 2000. We advise readers to take particular note of the areas most likely to be out-of-date and so requiring further research:

- Chemical recommendations—check with an agronomist or Infopest www.infopest.qld.gov.au
- Financial information—costs and returns listed in this publication are out of date. Please contact an adviser or industry body to assist with identifying more current figures.
- Varieties—new varieties are likely to be available and some older varieties may no longer be recommended. Check with an agronomist, call the Business Information Centre on 13 25 23, visit our website www.deedi.qld.gov.au or contact the industry body.
- Contacts—many of the contact details may have changed and there could be several new contacts available. The industry organisation may be able to assist you to find the information or services you require.
- Organisation names—most government agencies referred to in this publication have had name changes. Contact the Business Information Centre on 13 25 23 or the industry organisation to find out the current name and contact details for these agencies.
- Additional information—many other sources of information are now available for each crop. Contact an agronomist, Business Information Centre on 13 25 23 or the industry organisation for other suggested reading.

Even with these limitations we believe this information kit provides important and valuable information for intending and existing growers.

This publication was last revised in 2000. The information is not current and the accuracy of the information cannot be guaranteed by the State of Queensland.

This information has been made available to assist users to identify issues involved in ornamental horticulture. This information is not to be used or relied upon by users for any purpose which may expose the user or any other person to loss or damage. Users should conduct their own inquiries and rely on their own independent professional advice.

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Queensland Government

Integrated Pest Management in Ornamentals: *Information Guide*

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AgriLink
your growing guide
to better farming
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IPM starts with monitoring

Welcome to the IPM information guide

Integrated pest management (IPM) is not a new concept. In the broader context of using all available methods of controlling pests and diseases, IPM, of necessity, preceded the use of pesticides. The period after World War II gave us new chemicals that held pests at bay in a way that farmers for millennia could only dream about. The environment soon began to suffer from indiscriminate use of these new age pesticides and miracle cures failed because pests eventually became resistant to them.

Over the past 20 years, major changes have taken place in the thinking of growers, the public and governments about pest and disease management. It is no longer acceptable to think only in terms of pesticides when faced, inevitably, with crop losses due to pests and diseases. A revolution has been taking place in approaches to pest management. What was once considered relevant only to committed environmentalists has become standard practice.

There are many facets of this new integrated approach to pest and disease management. The intention of this publication *Integrated Pest Management in Ornamentals: Information Guide* is to highlight the most important ones relevant to the ornamentals industry in Australia. Many of these are just plain common sense. Good growers already practice sound pest and disease management to some degree.

A lot of thought has gone into developing the information guide that you have before you. We felt that it should have two main uses. It should be:

- a practical guide to IPM for all ornamentals producers, including outdoor, shadehouse and greenhouse situations
- a reference document to provide you with relevant contacts, products and further information.

The need for a proper understanding of IPM in ornamentals has meant providing you with a lot of detail in this guide. Don't be put off by its size. Use this information guide according to the particular needs of your operation. In addition, make sure that your staff get an opportunity to learn from it.

Before you attempt to develop an IPM program for your property, we would advise you to undertake the industry training course on IPM for ornamentals producers. The course provides competency-based learning and is an essential requirement for producers and staff. It supports competencies in managing plant health and developing an IPM program. The course is available from industry approved accredited trainers.

Integrated Pest Management in Ornamentals: Information Guide will serve as a resource document for the training course.

Producers should also buy a copy of the companion pocket-sized *Pests, Diseases, Disorders and Beneficials in Ornamentals: Field Identification Guide*, see Section 10, *Further reading* (page 5). It provides a visual guide to identifying organisms and disorders affecting ornamentals in Australia, and to commercially available biocontrol agents. Each entry is illustrated with colour photographs.

The information guide and field identification guide are cross-referenced for easy use.

The contents of this information guide and how to use them to best advantage are explained in an easy-to-use manner in *How to use this information guide* on page viii.

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How to use this information guide

For those considering IPM for the first time, *Section 1, What is IPM?* provides a brief description of the subject, its challenges and benefits.

If you are looking for a fast track to information on IPM, then try *Section 2, Common questions*. These came from a survey of growers and IPM specialists. The questions are comprehensive and will give you a head start to understanding many of the more obvious issues.

The companion pocket guide ***Pests, Diseases, Disorders and Beneficials in Ornamentals: Field Identification Guide*** (*Section 10, Further reading*) is also available to Australian ornamental plant producers. The field identification guide is a simple visual guide to identifying organisms and damage. For more detailed information on key pest and disease organisms affecting ornamentals in this guide, see *Section 5, Know your pests* and *Section 6, Know your diseases*.

For advice on designing an IPM program and using IPM on your property, key information can be found in *Section 3, Preparing for IPM: property and staff* and in *Section 4, Designing an IPM program: monitoring and decision making*. They provide essential information pertinent to the practical aspects of IPM in all ornamental crops. This includes site, management, cultural, chemical and staff considerations. How you should monitor and keep records, and using your records to develop your own action thresholds can also be found in these two sections. In addition, there is more detail on greenhouse structures, the greenhouse environment, and spray application equipment.

Biocontrol is a valuable approach that can make a significant contribution to reduced chemical use. *Section 7, Know your biocontrol agents* provides advice on which biocontrol agents are commercially available in Australia and how to make best use of them in an integrated approach to crop protection. It also details which chemicals are safe to use with biocontrol agents and which are not.

If you are looking for a consultant, biocontrol agent producers, or where you might get hold of sticky traps in your State, see *Section 9, Directory*.

Section 8, Crop notes helps you build a database of pests and diseases on your property. Most ornamentals producers have a range of crops in continuous production and there are overlapping production schedules. This has meant that data on key pests and diseases in

ornamentals and seasonal patterns of occurrence are very difficult to obtain.

We would like to provide the ornamentals industry with a clearer picture of the major pests and diseases in their crops. Industry needs a database of this information to assist producers to understand what to expect and to anticipate their occurrence. For any State, this database will help producers designing their own monitoring programs to anticipate the likely major problems.

Please help us make this a better IPM guide for future users by filling out the two blank forms in *Section 8, Crop notes* and sending them to one of the addresses provided. Make copies of the blank forms before you start using those provided.

And finally, for further details on useful Internet sites on IPM, relevant books, magazines and videos, turn to *Section 10, Further reading*.

Section 11, Glossary and *Section 12, Index* are designed to make it easier to use this information. We hope you find ***Integrated Pest Management in Ornamentals: Information Guide*** a useful contribution towards improving your pest and disease management practices and making your property a healthier, happier and safer workplace.



A sticky trap is an effective monitoring tool