REPRINT INFORMATION – PLEASE READ!

For updated information please call 13 25 23 or visit the website www.deedi.qld.gov.au

This publication has been reprinted as a digital book without any changes to the content published in 2004. We advise readers to take particular note of the areas most likely to be out-of-date and so requiring further research: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• Financial information—costs and returns listed in this publication are out of date.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 2004. 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 subtropical banana production. 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.

While every care has been taken in preparing this publication, the State of Queensland accepts no responsibility for decisions or actions taken as a result of any data, information, statement or advice, expressed or implied, contained in this publication.
GROWING GUIDE

Subtropical banana grower’s handbook

Main authors

Roger Broadley¹
Patricia Chay-Prove¹

Peter Rigden¹
Jeff Daniells¹

Contributing authors

Neil Treverrow²
Arthur Akehurst²
Peter Newley²
David Harris²
Tony Pattison¹
Paul McCarthy¹
Eric Gall¹
Bob Campbell¹

Coordinators

Noel Vock¹
Loraine Chapman¹

¹Department of Primary Industries Queensland
in collaboration with ²NSW Agriculture and ³Bananas NSW
## Contents

**Acknowledgments** ................................................... iv

**About the authors** .................................................... v

**Using this guide** ....................................................... vi

1. **Before you start** ..................................................... 1  
a checklist of the things you need to know before you start growing subtropical bananas

2. **Common questions** .............................................. 11  
most commonly asked questions about the plant

3. **Growing the crop** ................................................ 23  
our guide to establishing, producing and handling subtropical bananas

4. **Key issues** .......................................................... 65  
detailed information on the key decisions for subtropical banana growers

5. **Contacts & references** ........................................ 181  
a list of industry organisations, product suppliers and further reading

6. **Chemical handy guides** ..................................... 191  
a list of chemicals currently registered in Australia and their registered uses

7. **Index** ................................................................. 197  
an A to Z index to help you find information quickly
Acknowledgements

The authors wish to thank the following people who kindly provided technical information and advice for the contents of the subtropical banana grower’s handbook.

Some information for the handbook was extracted from the Agrilink Tropical Banana Kit by Stewart Lindsay, Donna Campagnolo, Jeff Daniells, Darryl Evans, Roger Goebel, Martin Gunther, Craig Lemin, Tony Pattison, Ron Peterson, Bruno Pinese and Dave Wharton. The authors acknowledge use of this information, as much of it is applicable to growing subtropical bananas.

The authors also wish to specially thank David Peasley, Peter Molenaar, Jeff Larkin, Bill Ward, David Astridge, Sharon Hamill and Ross Boyle for providing valuable comments for inclusion. Additional photos have been provided by Jeff Eldridge and Roger Broadley. Authors of Bananas: Insect and Mite Management, Bruno Pinese and Richard Piper have kindly given permission for the use of photos.

Lorraine Chapman provided the publishing services for the guide including image scanning, graphics manipulation, coordination, layout and desktop publishing. The authors also thank Carol Kroger for providing many of the line drawings.

Much of the initial information for the book was derived from a special information gathering workshop involving banana research and extension officers from DPI and NSW Agriculture, and funded by the Australian Centre for International Agriculture Research (ACIAR) through the project (PN9220), Development and Evaluation of Sustainable Production Systems for Steep Lands.

The information in the Subtropical banana grower’s handbook applies to growing Cavendish and Ladyfinger bananas in southern Queensland and northern New South Wales.

For information on growing bananas in tropical areas of Queensland refer to the Agrilink tropical banana information kit.

A companion colour book, PICTURE GUIDE: Subtropical banana problem solver shows photos of common problems and suggests what to do about them.

Please consult local information before applying information in the Agrilink kits to other banana growing areas.
About the main authors

Roger Broadley
Roger is an industry development officer with the Department of Primary Industries Queensland. He is based at Maroochy Research Station, Nambour where his work currently involves subtropical bananas, custard apples and persimmon. Roger has worked on a variety of horticultural tree and plantation crops and has a special interest in whole of industry development. Recently he worked on an Australia wide project on Ladyfinger bananas collaborating with specialists from New South Wales and Queensland.

Peter Rigden
Peter is a development extension officer with the Department of Primary Industries, Queensland. He has 16 years experience in horticulture overseas as a plantation manager. Since joining the DPI in 1996, Peter has been responsible for providing advisory services to commercial producers in south east Queensland. During this time, he has also been involved in a wide range of other work including a project to help develop the Ladyfinger banana industry in Australia.

Patricia Chay-Prove
Patricia is an information extension officer with DPI’s Centre for Wet Tropics Agriculture, South Johnstone. She has 17 years’ experience in plant breeding, physiology of field crops and in tropical fruit production. Patricia has been responsible for providing information and extension services to potential new commercial growers. She is also the national coordinator representing Australia in INIBAP’s Regional Information System for Bananas and Plantain.

Jeff Daniells
Jeff is a Principal Horticulturist at DPI’s Centre for Wet Tropics Agriculture, South Johnstone. He has 18 years experience in banana research and development. This has included trials on maturity bronzing, fertilisers, varieties, diseases, irrigation, tissue culture, plant spacing and time of planting.
# Using this guide

The handbook is constructed around two important principles. Firstly, it focuses on the core information that is most needed and regularly used by growers. Hence, it does not provide detailed information on all areas of growing the crop; where additional information is available and considered useful for further study, references are provided. Secondly, the information is presented in line with how it has been sought from the authors over a number of years. Hence, there are different chapters of the handbook designed to suit different needs. Here is a brief roadmap:

<table>
<thead>
<tr>
<th>If you are an:</th>
<th>Start with:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intending grower (thinking about growing subtropical bananas)</td>
<td>Before you start—a checklist of the things you need to know before you start growing the crop, and will give you the best introduction into other sections of the handbook. Other useful chapters are: Common questions—the most commonly asked questions about growing the crop Contacts—a list of industry organisations, product suppliers References—further reading</td>
</tr>
<tr>
<td>New grower (about to establish a plantation, in the process of doing so, or taking over a plantation as a new grower)</td>
<td>Growing the crop—the authors’ guide for establishing, producing and handling the crop and will refer to other appropriate sections of the handbook where needed. Other useful chapters are: Key issues—detailed information on the key decisions for subtropical banana growers Contacts—list of industry organisations, product suppliers References—further reading Chemical selector—list of chemicals currently registered in Australia and their registered uses</td>
</tr>
<tr>
<td>Established or more experienced grower</td>
<td>Key issues—chapter contains the most detailed technical information on the key decisions for growers. Other useful chapters are: Chemical selector—list of chemicals currently registered in Australia and their registered uses</td>
</tr>
</tbody>
</table>

Remember that the handbook contains a detailed index.
Limitations

There are some limitations in using this handbook. These include:

- The book does not contain colour pictures of pests, diseases or other problems that occur in subtropical bananas. These are found in the companion book—*PICTURE GUIDE: Subtropical banana problem solver*. This book has photos of problems found in growing subtropical and tropical bananas along with suggestions on how to solve them. Colour photos are also found in *Product description language—Ladyfinger bananas*.

- We do not intend that the handbook be used as the only tool in reaching key management decisions. We always recommend that you also seek independent advice from consultants.

- Chemical registrations can change. Always check the registration details on the label before using the product. Sources of updated information are contained in Chapter 5, *Contacts and References* (page 182).