

The DOOR Manual for Plant Nurseries

Reprint – information current in 1996



Let's **DOOR** Our Own Research
The DOOR way to practical solutions

REPRINT INFORMATION – PLEASE READ!

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This publication has been reprinted as a digital book without any changes to the content published in 1996. We advise readers to take particular note of the areas most likely to be out-of-date and so requiring further research:

- 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. 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 1996. 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 involved in the nursery and garden industry wishing to conduct their own research. 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

INTRODUCTION

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1.1

RESEARCH – A NATURAL ACTIVITY

Humans have always searched for better ways of doing things. In other words, they have always carried out research. To research is an instinctive part of being human.

Research helps people compare new ways of doing things with current practices. This manual will help Do-Our-Own-Research (DOOR) participants carry out research that will enrich their own operations and their industry as a whole.

1.2

THE NURSERY ENVIRONMENT

Nursery operations depend on the interacting effects of a wide range of conditions and factors: media, chemicals, species, water, etc.

Nursery operators need to know how to manipulate these factors to achieve best results.

The directions in this manual can be followed easily by nursery operators. The nursery environment is ideal for operators to carry out their own sound and rigorous research because it often involves small moveable pots, a controlled environment and short production cycles.

This manual was developed to help operators carry out that research.

1.3

HOW TO DEVELOP INFORMATION

Not enough information is available to nursery operators on the factors that affect their products. Information is often either not appropriate, not reliable or not freely available because of its commercial nature.

Public sector institutions develop generic cultural information for the nursery industry. However, unless the operator is growing the same species under similar conditions, the information is rarely specific enough.

Public funding for research is declining so it is unlikely that such research is ever likely to be customised enough to meet the requirements of individual nursery operations.

Specific research information will have to be generated; without it, the best decisions will only occur at random. The nursery operator is the best person, perhaps the only person, to develop that specific information in the most cost-effective way.

Many nursery operators are already carrying out instinctive research based on subjective assessment and minimum record keeping. Impressive gains have been made this way but more can be done. A series of smaller gains along the production chain will add together for a valuable final outcome.

1.4 STATISTICALLY SOUND RESEARCH

The time is ripe for nursery operators to do their own statistically sound research, confident that they can find relevant answers at a level of precision they may have thought beyond their grasp.

The answers they get will be directly relevant to their own operations and provide a solid base on which to make good decisions. This is what DOOR is about: the development of practical solutions to problems by the people who are on site.

1.4.1 USING STATISTICS

Researchers at any level must be able to detect differences between treatments and compare the results of research. The greater the ability to separate these differences, the more valuable the research will be.

Instinctively, most operators would be able to detect differences of more than 30 or 40 per cent in plant characteristics. But, to get the most value out of more sensitive research, an operator has to be able to detect differences of as little as 10 or 20 per cent.

With computers, sound statistical research is within the grasp of anyone engaged in instinctive research. Following the simple statistical rules at the beginning of chapter 7, even the most inexperienced researchers can be confident in the output of their analyses. This manual explains the processes of effective statistical analysis as well as how to carry out careful research.

Statistical research provides results that can be used to formulate recommendations and make objective decisions. This manual was developed to help operators carry out such research.

1.5 THE DOOR MANUAL

1.5.1 THE DOOR CYCLE

The DOOR implementation cycle provides the structure on which the manual is based. It leads the reader through the chronological process of research, commencing at the opportunity or problem, and concluding with its recommendation for action. The intermediate steps are outlined in the implementation cycle that is illustrated at the beginning of each chapter.

1.5.2

FORMAT

This manual has been written and designed with the reader in mind. The text is thorough and complete with key points to summarise the main points of the text. Space has been provided throughout the book for your own notes and observations.

A recurring diagram at the beginning of each chapter locates that chapter in terms of the whole DOOR process.

The appendixes contain examples and blank formats ready to be photocopied for use. Lists of accredited consultants and nursery operators appear in appendixes 1 and 2 respectively.

1.5.3

CONTENT

The major part of this book outlines how to conduct statistically sound research. Some of these steps will be carried out by the operator, some by the consultant, and some by both together. The operator needs to have some understanding of the consultant's activities in order to get the best results from their team work and communication.

1.5.4

BACKGROUND TO THE MANUAL

This manual evolved out of a two-year project, partly funded by the Horticulture Research and Development Corporation, to assess the capacity of nursery operators to carry out statistically sound research. The success rate of the experiments and the strong support of the operators themselves led to the development of the DOOR training course and its ongoing consultative support.

This manual is the essential text for DOOR operators courses and a reference for the DOOR consultants course. After the course, it will continue to be a valuable aid to which DOOR-qualified operators can refer.

1.6

THE FUTURE OF THE MANUAL

The manual will continue to be updated and improved. Your feedback and suggestions will contribute to this work. Send your comments to:

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