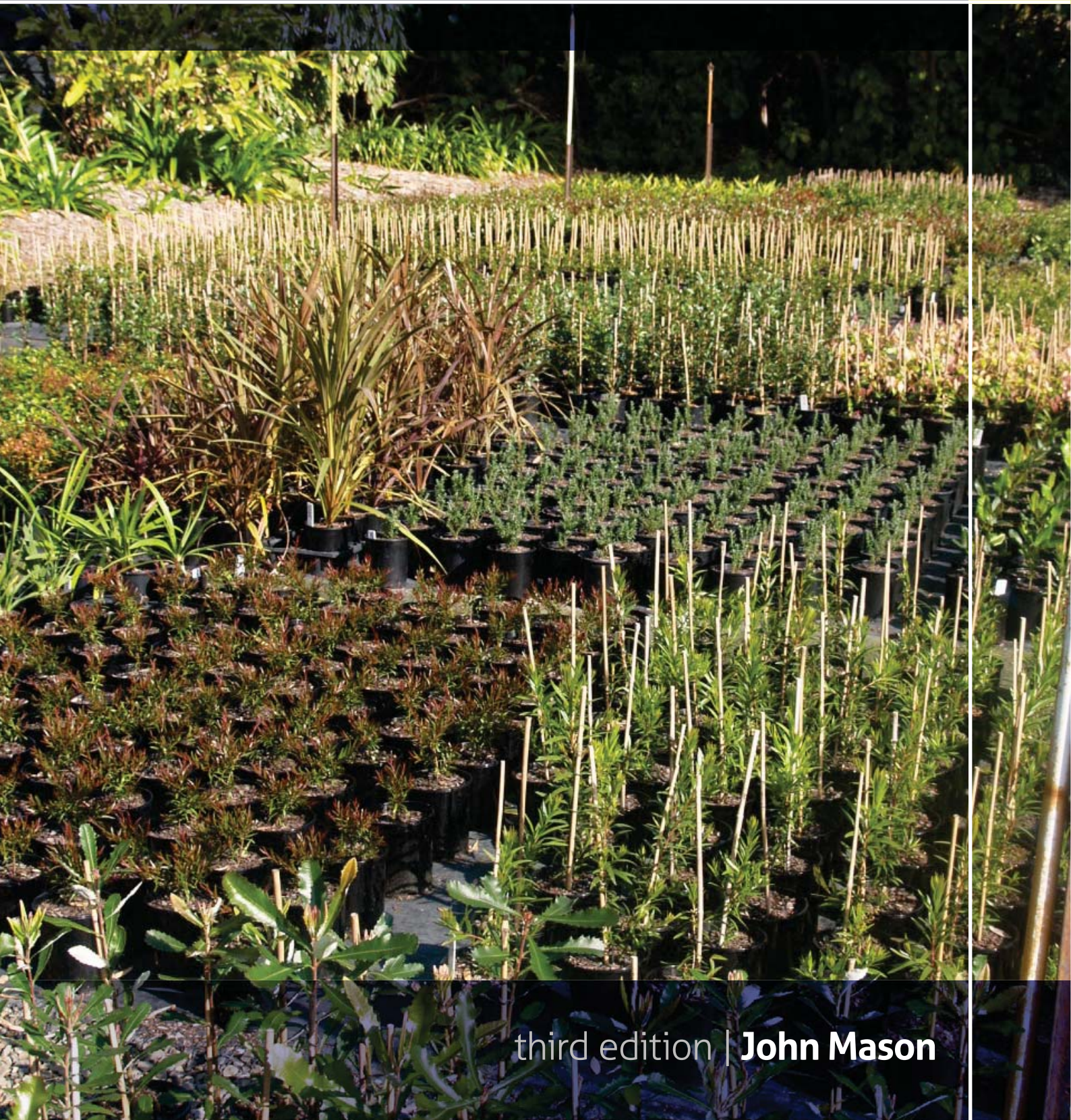


Starting a Nursery or Herb Farm



third edition | **John Mason**

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PREFACE

If you've ever wanted to grow plants for a living, put your gardening talents to good use, or start your own business, this is the book for you.

Today there is an unprecedented interest in gardening, houseplants and in the use of herbs (for purposes both culinary and medicinal), and a nursery or herb farm can represent a viable small business proposition.

In this book John Mason, an experienced nurseryman and horticultural educator, explores the possibilities open to you. He examines many alternative methods of operation, including the wide variety of product types, and discusses techniques of management and planning. There is detailed coverage of equipment and materials, dealing with plant health problems, and techniques of propagation - both from seed and by budding, grafting etc. Indeed there is much here of value to the home gardener, including a unique feature of the book - a guide to the methods of propagation of over 400 species of plants.

Whether you plan to begin on a modest scale in your back yard or to make a substantial investment, careful forethought is needed.

John Mason deals with all the points that need to be considered before you start stressing at every stage the various decisions which should be taken to avoid problems later on.

Starting a Nursery or Herb Farm is a book that will not only multiply your chances of success but remain a valuable reference for many years.

JOHN MASON graduated from Burnley Horticultural College in 1971. Since then he has run his own nursery, worked in landscape design, held the post of Superintendent of Parks and Gardens in several Melbourne suburbs, been a part-time lecturer at Footscray Institute of Technology, Burnley Horticultural College and the Council of Adult Education in Melbourne, and a consultant on children's playgrounds for the Playgrounds and Recreation Association of Victoria. John is also the author of over 40 books and now runs ACS Distance Education, a correspondence school teaching courses in an huge array of subjects.

INTRODUCTION

This book is written as a guide or handbook for the person attempting to start or run a nursery or herb farm. It does not give all the information you might need or want but it does cover all the important aspects of the topic.

Use this book as a guide, a starting point maybe a reference to come back to, but look at other information as well.

Study closely the herb farm or nursery industry in your part of the country. Speak with appropriate government departments such as agriculture, forestry and CSIRO. Speak with horticultural clubs, colleges and schools. All of these places can help you with the detailed information you need to acquire about your chosen sector of the industry.

It is very important for you to realise that there are tremendous variations in the way plants are treated from place to place. Information in this book is relevant to 'average' Australia or New Zealand, if there is such a place.

In general, information is relevant to climates similar to Sydney, Adelaide, Perth, Canberra or Melbourne. In warmer or cooler climates, you may need to modify the recommendations to some extent.

Always remember that every plant is an individual. Ten different plants grown from the same batch of seed are different. They differ in their shape and growth rate, their disease resistance and their nutrient and water requirements. Bear in mind also that the same plant requires different treatment in different places and at different times of the year.

Whenever reading any book on gardening (propagation or any other discipline), consider where the author has gained his experience. Information written by a Melbourne gardener, unless stated otherwise, is probably only fully relevant to Melbourne.

Any herb farmer or nurseryman is going to need to use several books for reference and it is important to know that the reference books are accurate. Once again consider the author, their background and their training. The most likely books to provide credible information must always be those written by people with solid academic training plus extensive practical experience in the subject. There are many valuable publications written by people who have only the practical experience.

Beware of books written by artists, journalists and engineers, who sometimes write gardening books simply because they're interested in the subject and happen to have the 'contacts' through writing on other subjects. A gardening book by an artist or architect can be a beautiful coffee-table publication, but in terms of accuracy for reference, can lead to disaster.

PLANT CLASSIFICATION

Despite the fact that every plant is an individual, some plants do share characteristics to a greater or smaller degree, and they are classified on the basis of such similarities. Plants are known by both common and scientific names.

Unfortunately, the same plant can often have many different common names or many different plants can have the same common name. This situation has, in the main, made the use of common names confusing and often unreliable.

The confusion is not so marked with herbs, however - perhaps because of their long history of use - and herbs are often sold only under the common name, whereas most other plants are usually grown and sold under their scientific name.

Scientific names, being in Latin, may initially be more difficult to learn, but they are totally reliable.

Any one plant has only one scientific name. In this system, plants are classified by dividing them into groups with similar characteristics; these groups are then divided into groups with even closer similarities and so on.

There are seven levels of division:

- All plants are divided into several *phyla*
- *Phyla* are divided into *classes*
- *Classes* are divided into *orders*
- *Orders* are divided into *families*
- *Families* are divided into *genera* (singular: *genus*)
- *Genera* are divided into *species*
- *Species* are divided into *varieties*

When identifying a plant we use the genus and species names (and if applicable the variety) e.g. *Eucalyptus* (genus) *camaldulensis* (species).

Correct identification and labelling of plants is essential. Help with the identification of plants can be obtained from botanic gardens, university botany departments or your government herbarium (in most capital cities).

THE ALTERNATIVES

There are a number of very basic decisions which need to be made before commencing a herb farm or nursery operation. These alternatives should be reconsidered every year or two through an operation, and perhaps changes made accordingly. These first decisions are discussed in turn below.

FORM OF PRODUCT

Most nurseries and herb farms specialise in one or two of the following products.

Plants in Pots

This is the way the major part of the herb farm and nursery industries operates. The scale at which this sector of the industry operates makes growing in containers a low-risk operation compared with some other alternatives. Plants in containers do, however, become potbound and need to be sold or else potted up within a certain time.

Plants in the Open Ground

Plants are grown in cultivated paddocks until ready for sale, at which time they are dug up and prepared for sale in various ways:

- they are put into containers
- soil is removed from the roots (deciduous plants only) and they are stored over winter with roots in moistened shavings or straw
- the soil ball is held together by tying hessian around it
- in some heavier soils, plants are sold with whatever soil clings to the roots left as such, not contained in any way by cloth or any other container

After container growing this is the next most common practice.

- Open-ground growing is economical in that it doesn't require the same expense for containers and usually it calls for less watering.

Bare Rooted Cuttings

Some nurseries specialise in propagation, that is producing roots on cuttings. They leave the job of growing the plants up to a saleable size to another nursery.

This type of operation requires less area but more expertise and a greater initial outlay on expensive propagating structures and equipment.

Specialised Container Products

Hanging baskets, terrariums, bonsai mini-gardens and plants in decorative tubs are all products in which a nursery can specialise. Before commencing this type of operation however, study carefully the demands of the market and know what competition exists.

You also need to be sure you know how to produce your product and how to produce it well. Anyone can make a bonsai but it takes skill to make a good one which will survive.

Herbal Products

There is a definite growth in demand for such things as dried herbs, teas, oils, candles and pillows. Compared to the broad nursery industry, however, this industry is minute. You should be careful about depending too heavily on this type of operation. It is more sensible to start as a sideline and grow, than to throw everything you have into producing a line of herbal products.



Plants grown in the open ground may be sold in several ways including, as shown here, with a soil ball attached to the roots eg. bare rooted (Dahlia bulbs).

Herbal products such as cosmetics, herb vinegars, pomanders, and dried herbs for cooking are becoming ever more popular, but do not rely on them heavily at first - business may take time to build up.



GROWTH STAGE

At what stages of the plant's development will you be handling the plant? The answer could be either one or a combination of the following stages.

Propagation

The beginning of the plants life: seed is sown, a cutting is struck, bulbs are divided or a fruit tree is budded etc. This stage requires greater technical skill and, in some cases, more expensive equipment than other stages.

Planting Out

The small propagated plants are put into pots, planted into the open ground or into some other situation in which they can be grown to a larger size. There is more difficulty at the beginning of this operation when the plants are moved from a pampered propagating environment to a harsher growing-on environment. As they become older, they harden and become more resistant to disease and environmental problems.

Advanced Growing

This involves growing plants to a large size either in containers or the open ground. Though these plants might be hardy, this type of work is heavy and usually requires at least some machinery to handle the plants.

Many nurseries supplement their sales of plants with ancillary



products - pots, window boxes, watering cans, and various sprays and treatments.

QUANTITY

On what scale will you operate? Will it be a one person part-time or fulltime business or will several people be engaged full-time? The quantity of plants handled annually will depend very much on the stages of the nursery or herb farm operation (outlined above) in which you are involved. A propagation nursery needs to produce up to 100,000 cuttings a year to be a reasonable operation for one person. A nursery which does everything from propagation through to retailing can be

a feasible operation for one individual producing as few as 10,000 plants a year.

QUALITY

This raises such questions as the type of label (with a photograph, printed or simply handwritten, type of container cheap plastic bag simple solid plastic pot or better-looking plastic pot), whether plants are sold with a stake or trellis, and whether plants will be pruned to shape as part of the growing process. Will plants which don't thrive be thrown out or still sold? Will plants which are potbound be sold? It is not necessary to decide all these details at the planning stage, but you should formulate a general policy on quality.

SELLING

The first decision to make is whether your operation is to be wholesale (selling to retailers or resellers) or retail (selling direct to the general public). Retail operations are generally more demanding in terms of time, but give a better return per plant. A retail nursery or herb farm must be attended at the advertised opening times irrespective of whether customers are there or not. It is difficult for someone running a one person retail operation ever to have time to take a holiday, whereas a wholesale nurseryman needs only to employ a person on a part-time basis to do some watering when he takes annual leave.

You should aim at growing your produce for a particular market. Consider the following alternatives:

- your local area, your region or perhaps interstate. Interstate sales (southern states) are appropriate for 'indoor' or tropical plants grown in Queensland
- bulk users of plants such as council parks departments, housing estates, landscapers, farmers etc.
- supermarket chains and other large business organisations
- home gardeners. Even here you may decide to aim at inner suburban, outer suburban or country markets

Plants can be sold both retail and wholesale by a number of alternative methods.

Mail Order Sales

Sales are conducted either by advertising in magazines or by sending lists or catalogues to prospective customers through the mail. Most plants can be sent successfully by rail, road or mail, but it is very important that they are packaged in a proper way to avoid damage.

Roadside and Market Sales

These involve setting up a temporary stand which you operate only when you have something to sell. This type of operation is usually small-scale, but can be a very worthwhile supplement or contribution as a part income. It is rarely, by itself, a satisfactory way to earn a complete income.

Permanent Outlet

This is the most common, most demanding and most profitable way of conducting any type of sale.

Truck Sales

One of the most common wholesale selling methods is to make regular visits to a round of retail establishments in a truck carrying a selection of plants or other products. The retailers view the merchandise and buy direct off the truck. This system can be difficult for the beginner, but once you learn what plants or herb products are most likely to sell, then you can be almost assured of complete sales before starting your round.

Contract Sales

Some government departments, supermarket chains and other large organisations will enter into contracts with nurseries to propagate and grow specified numbers of certain varieties of plants. Some retail or 'growing-on' nurseries will sign contracts with propagation nurseries to supply them with plants at some future date. This way of selling is more certain for the nurseryman, but usually pays less per plant.

The greater part of the nursery industry operates by selling plants in pots. Seedlings, especially vegetables, may be grown in trays and sold for planting out simply wrapped in cloth or newspaper.



Export Sales

Australian nurseries began exporting plants to a number of countries in recent years. Both independent and government reports indicate enormous potential for export sales of Australian grown plants, especially Australian natives.

Market sales can yield a useful supplementary income, but are rarely sufficient to provide a living.



MANAGEMENT AND ORGANISATION

To work efficiently and profitably, a nursery or herb farm must be both well organised and properly managed in a clear conscious manner. As with most other businesses, it is essential to be confident enough to make firm clear decisions when they are needed. The nurseryman or herb farmer who hesitates too often or takes too long to make decisions is almost certain to fail.

SELECTING THE SITE

It is not always possible to have the ideal site. Sometimes a piece of land is already owned or perhaps financial limitations force a compromise. Important considerations are discussed on the following page.

To Own or Rent?

If money is to be borrowed for any part of the operation, land is a better proposition for a loan than most other things. You should consider the permanency of your operation. Land ownership is considered a less flexible means of operation than renting. Renting, however, can be an insecure form of tenure.

Size of Site

Generally, nurseries or herb farms require significantly less land than other types of primary production. Propagation nurseries and retail operations can be successfully conducted on sites of less than one acre. Standard container growing of herbs or other plants is usually conducted on a couple of acres. Some of the largest container nurseries in Australia are able to run on less than five acres because they are carefully organised and managed. Open-ground nurseries can be anything from a couple of acres to several hundred acres.

If your site is not ideal you can at least make the most of it: terracing using railway sleepers to create beds in the sloping ground. Use windbreaks to protect plants in open places



Proximity to Market

If retailing, the operation is best located on a major road travelled frequently by large numbers of prospective customers or, alternatively, in a centre which is frequented by prospective customers. Avoid locating too close to similar existing businesses. If wholesaling, locate within reasonable proximity to customers or to existing transportation networks (e.g. a mail-order nursery selling throughout Australia could successfully establish close to any reasonable railway station).

Availability of Water

All plants need water to grow, but some need more than others. A reliable source of unpolluted, salt-free water is essential.

Fertile Soil

This is only really important when growing in the open ground. Good container nurseries can be established in very infertile areas.

Climate

If establishing in an unsatisfactory climate for the plants being grown, extra expense will need to be incurred on developing climatic controls (glasshouses, windbreaks and shadehouses).

Availability of Materials

In container nurseries, in particular, it is important to be close to a reliable source of material which can be used in potting mixes. Cartage costs on sand, loam, lignite, pine bark and other such materials can be significant, and you may be charged for every kilometre each cubic metre of material is carted.



A successful nursery business does not necessarily require large premises: this setup operates from a house block in the middle of a city.



Many shops supplement their sales with a nursery department, and an outside display can secure many casual sales to passers-by.

SELECTING THE CROP

All too often, people enter horticulture with very definite prejudged ideas on what they will grow, where they will grow it and how they will grow it. While such people have a real advantage in that they obviously love that particular type of plant they can only benefit by giving objective consideration to *all* the alternatives.

Crops grown by nurseries fall into the following broad categories:

INDOOR OR TROPICAL PLANTS:

Grown outside in the northern parts of Australia; the same are often grown indoors in cooler parts.

NATIVES:

Plants indigenous to Australia.

PERENNIALS:

Soft-wooded (herbaceous) plants grown for decoration.

BULBS:

Also corms, rhizomes and tubers grown for flower, often with perennials.

EXOTIC ORNAMENTALS:

Woody plants not native to Australia grown for nonproductive or amenity purposes. Often nurseries specialise in one particular group of exotics (e.g. azaleas, geraniums or cacti).

Deciduous fruit tree nurseries usually also grow deciduous ornamental trees which require similar techniques and treatment. Some specialise in citrus or berries.

The principal choice facing the herb farmer involves the form in which the crops will be sold:

PLANTS FOR SALE:

Either grown in containers or in the ground.

CROPPING:

Herbs grown *en masse*, the foliage being cropped and perhaps dried or oil extracted for sale.

HERB PRODUCTS:

Growing plants to provide the raw material to produce a range of herbal products (e.g. teas, dried herbs, candles and preserves).

When considering the alternative crops, there are a number of questions to which you must find the answers. How well does the product keep? If it can't be sold immediately, can it

be potted up? Will it still be saleable in a month or a year?

How long does it take to become saleable? Some operations (e.g. selling 5 cm tube-size plants) can give a return in three