

STUDY GUIDE

PLANT

MANAGEMENT

IN NURSERIES &
GARDEN CENTRES

SHORT COURSE

HOW TO WORK THROUGH THIS COURSE

Over the following pages, you will move through a logical, self-paced learning experience that can enlighten and educate you on plant management in nurseries and garden centres.

It is important from the outset to understand that learning about something is not the same as just reading about it. Learning implies a permanent change in what you know and can do.

Anyone can read a book and understand it; but for most people the detail of what you read is largely forgotten.

Reading something once only puts information into short-term memory. It is soon lost if you don't 'work' on it. Studying the same information takes longer, but by thinking about it and processing it you can transfer that information to long-term memory. This way, you will enhance your ability to recall and apply that information for years to come. If you take your time to work through the 6 lessons that follow, you will learn.

Read, Reflect, Research, Revise

Throughout the following pages, you will find not only things to read about, but also things to do:

1. Throughout each lesson, there are suggestions of things to do under the headings "Learn More". These are all sorts of ideas about things you can do in order to explore the subject further.
2. At the end of each lesson, there is an interactive self assessment test (assignment), for you to undertake. When you click on this, your computer needs to be online. You will be taken to our cloud-based online school. The answers you choose will be evaluated immediately, and your results can be seen on completion of each test. You can return and repeat tests if you wish.

Undertaking these tasks will involve reflection, research and revision of the topics you read about. By repeatedly encountering each topic in different ways, your perspective on each subject will broaden, and the commitment of information to longer term memory will strengthen.

You don't need to undertake all of the suggested tasks if you don't want to; but we strongly recommend that you do some in each lesson, and that you take all of the self-assessment tests.

The more time you spend doing these things, the stronger your learning will be.

Completing the Course

After completing all 6 lessons you will be presented with a final assessment which can also be undertaken online.

Do not attempt to do this until you have worked through all 6 lessons, and feel like you have learnt the subject well.

Upon finishing this final assessment you will immediately see your final results, and you can save a pdf copy of those results as a "Certificate of Completion".

Welcome Audio

Click the button below to listen to the welcome audio for this course. This feature is supported by most computers and some mobile devices.



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LESSON 1 PROPAGATION

Propagation is an important step in the nursery production process, since it is through this step that plants are produced. Protected nursery environments are used in the production of plant stock for a wide variety of purposes including:

- Growing-on to produce mature potted stock for retail and wholesale sales.
- Transplanting to in-ground nursery beds.
- To provide seedlings for horticulturalists such as landscape gardeners and market gardeners.

Some nurseries choose not to undertake on-site propagation because it requires a high level of skill and is an area of commercial vulnerability. They find it easier to purchase 'rooted cuttings', 'tube-stock' or 'tissue cultured plants' and to simply grow them on for resale. As a result of this, there is a market for propagated stock in the nursery industry, and a niche exists for nurseries that choose to concentrate on propagation.

Propagators need to be highly conscious of the costs and benefits of their production methods since there is increasing industry pressure to keep product costs down and an ongoing need to achieve profitable returns. Production methods need to be intelligent and take account of the return for labour input.

There are many different ways of producing plants, though most

plants are produced commercially by either seed or cutting propagation. 'Tissue culture' or 'micropropagation' techniques carried out in a laboratory are sometimes used where very large numbers of one plant variety are required quickly, or where limited propagation stock is available. Other plants (e.g. roses, deciduous fruit and ornamental trees) are traditionally produced by budding and grafting onto seed or cutting grown rootstocks. Division and separation are commonly used for the propagation of bulbs and herbaceous perennials.

Other propagation techniques (e.g. layering or marcotting) may be important in the propagation of some specific types of plants; however, they are relatively insignificant when taking a broad view of the nursery industry.



Camellia cutting preparation

Suggested Tasks: ▼

Throughout this course you will be provided with suggested tasks and reading to aid with your understanding. These will appear in the right hand column. Remember: these tasks are optional. The more you complete, the more you will learn, but in order to complete the course in 20 hours you will need to manage your time well. We suggest you spend about 10 minutes on each task you attempt, and no more than 20 minutes.

LEARN MORE >>>

Suggested Tasks

Speak with someone from a nursery or who otherwise has experience propagating plants, and ask what methods of propagation they commonly use, and for which types of plants.



African Violet leaf cutting with new growth emerging

SEXUAL PROPAGATION

Sexual propagation involves growing a plant from a seed or spore which has been produced by fertilisation of the female part of a plant by the male part. Plants grown this way can have some characteristics of one parent and some characteristics from the other parent. A sexually propagated plant is not always exactly the same as the plant from which the seed or spores were taken. Most flowering annuals, vegetables, biennials and perennials are grown this

way. Ferns and some trees and shrubs are also propagated sexually in the nursery industry.

Dormancy Factors Affecting Germination

In their natural state, many species have adopted mechanisms that defer germination. This process is called dormancy. Seeds from some plants are more difficult to propagate than others because dormancy is induced by