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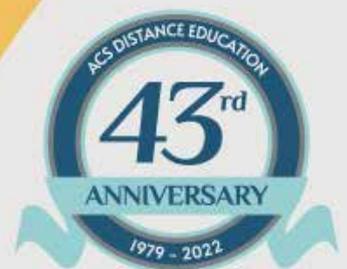
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# Getting Work in Horticulture

**A GUIDE TO CAREERS IN HORTICULTURE**

by John Mason

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# CREDITS

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**Written by**

John Mason

Dip.Hort.Sc. FIOH, FAIH, FPLA

**Photos**

John and Leonie Mason

**Published by**

ACS Distance Education

**ACS Distance Education**

P.O. Box 2092

Nerang MDC

QLD Australia 4211

Phone: (+61) 7 5562 1088

Fax: (+61) 7 5562 1099

Web: [www.acs.edu.au](http://www.acs.edu.au)

Email: [admin@acs.edu.au](mailto:admin@acs.edu.au)

**ACS Distance Education UK**

P.O. Box 4171,

Stourbridge, DY8 2WZ

United Kingdom

Phone: 0800 328 4723 (within UK only)

Web: [www.acsedu.co.uk](http://www.acsedu.co.uk)

Email: [admin@acsedu.co.uk](mailto:admin@acsedu.co.uk)

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# CHAPTER 1 WORKING IN HORTICULTURE

Horticulture is an industry that will always be with us; human life cannot exist and thrive without plants - they are integral to human survival. That fact alone makes horticulture not only important, but perhaps the only career that mankind is unlikely to ever see disappear.



**Plants are cultivated to provide food for farm animals, food for ourselves, and a wide range of other products...**

Plants keep our air useable by replenishing the oxygen we breathe and through filtering undesirable particles. Plants are cultivated by man to provide food for farm animals, food for ourselves, and a wide range of other products from building materials to oils and fibre. Without plants, temperatures would rise higher and fall lower. These fluctuations would make the earth erode faster, plants would cease to grow and eventually we wouldn't have anything to eat.

Plants also provide us with beauty. Recent research suggests that gardens

and parks are integral to human mental health; spending time within a natural environment lowers mental fatigue and dissipates aggressive tendencies. Through social interaction and participation, community gardens encourage social connectedness and a sense of community pride; bonded communities are also safer to live in.

So we need plants for our survival as a species, and for the survival of the planet, and because of this there will always be a thriving horticulture industry.

## SCOPE OF HORTICULTURAL INDUSTRIES

Horticulture involves “growing plants for an intended purpose”. This purpose might be very obvious such as providing food, or producing ornamental plants for an urban garden; but it could also be more obscure, such as filtering pollutants from the air, reducing the negative effects of storms, or creating an environment that is friendly to people or animals.

The broad scope of horticulture means that there are many different industry offshoots including, but not limited to:

- Growing plants for landscapes and green spaces
- Growing flowers and foliage for the floristry industry
- Urban parks
- Home gardens
- Turf
- Forestry
- Nursery plant production
- Fruit production
- Edible fungi production
- Vegetable production
- Essential oil production
- Pharmaceutical plants
- Fuel crops (bio-fuels)
- Soil improvement crops – for production of composts, fertility supplements, etc.

## HORTICULTURAL CAREERS WILL NOT DISAPPEAR: BUT THEY MAY CHANGE

We all know that the world is changing fast. This is evident in everyday life, in business, in industry, and in our personal lives. Almost every week we are offered new and more sophisticated technology to help us communicate or to perform common tasks. The horticulture industry too has not been exempt in this evolution; plant propagation, plant care, harvesting techniques, growing systems, the way we care for golf courses and parks and even our approach to home gardening, have all changed dramatically over recent decades. These changes will continue as new techniques and new technologies are formulated and introduced.

If you want to have a career in horticulture, you must recognise the inevitability of these changes. To have a long and sustainable career, you need to be able to adapt to change, and to excel you need to embrace and take advantage of change. To achieve this, your knowledge and skills in horticulture must be broad based. If you understand the fundamental skills needed - across all sectors of horticulture - you will be able to see opportunities as they arise and confidently move from one sector to another, throughout your career. As an example, anyone with underpinning knowledge of plant science and plant cultural practices: plant growth and identification, soil management, pruning and pest control and the associated technologies, will be able to work in landscaping for a few years, then move to turf management or nursery production and later work in crop production.

Sound, broad-based training in the fundamentals of horticulture is a good starting point for entering this industry. However, not all courses on offer will be broad enough or in-depth enough to set you up for a sustainable, lifelong career – so you need to understand the fundamentals required in horticulture (in general) and then choose a diverse course, that enables you to achieve these aims.



**The horticulture industry will continue to change as new techniques and new technologies are formulated and introduced.**

## TYPES OF JOBS IN HORTICULTURE

Horticultural jobs fall into one of three categories:

1. **Amenity Horticulture** – covers anything that is concerned with creating or enhancing an environment that is more functional or aesthetically pleasing. Areas for employment include: turf care, parks, botanic gardens, National Trust gardens, reserves, cityscapes, and private gardens. Employees may have skills in landscape design and construction, arboriculture, and gardening.
2. **Production Horticulture** – covers enterprises that are creating products from plants; including fruits, vegetables, and nursery stock, to crops harvested for oil production or seeds. Hydroponics and aquaponics are also specialised areas of this industry.
3. **General Horticulture** – these are jobs that overlap the areas of production and amenity horticulture (e.g. a teacher may teach methods and techniques associated with both groups, a writer may write for both types of industry, and a scientist may undertake research which is relevant to both).

Many horticultural jobs are within small businesses. Opportunities abound for self-employment in this industry; it is common for graduates from horticulture courses to spend at least part of their working life running their own business.

Small businesses do employ horticultural staff too - but opportunities

are obviously always going to be limited if you work for a relatively small business. In countries and regions with clearly defined seasons, there may be less work during the winter months. For instance, a small landscaping business may recruit additional staff over the spring and summer but be unable to keep them employed over the winter. Having a wide range of skills will offer an employee greater resistance to seasonal changes in employment.

Over the years governments (generally) have gone through cycles of employing but then sacking large numbers of staff. In recent times, large companies - including some that may have existed for over 100 years and which were formerly regarded as being a secure employer - have closed divisions and sacked employees on a large scale.

Whilst there are opportunities to move along a career pathway with some of the long-established horticultural enterprises (e.g. from gardener, to supervisor, to manager), in a world that is changing as fast as it has been in recent years, it is wise to consider how uncertain the future of any career pathway might be. This applies to all industries - not just horticulture.



**Horticulture can benefit peoples quality of life by creating and mainting a park for people to walk in.**

## WHAT ARE THE BENEFITS OF HORTICULTURE?

Horticulture has many benefits which grouped into economic, environmental, and quality of life benefits.

### Economic Benefits of Horticulture

- Property value increases
- Increase in occupancy rates
- Commercial properties become increasingly attractive to customers
- Outside investment comes in
- Lopping trees & maintaining bushes, etc. means a reduction in street repairs, building repairs, etc.
- Environmental buffering puts less stress on physical infrastructure – drains, roads etc.
- Reduced health care costs from accidents
- Reduced energy bills
- Job creation for local horticulture industries
- Associated industries thrive e.g. plant container makers, lawnmower manufacturers and suppliers
- Less reliance on imported products
- Generates tax revenues
- Tourism value increases
- Home food growing improves food security and reduces food bills
- Harvesting wood, compostable materials etc. can reduce need to buy fuel, compost, organic mulch, etc.

## Environmental Benefits of Horticulture

- Improves air quality
- Biodiversity conservation
- Saves on energy
- Reduced noise pollution
- Reduced urban glare
- Control of erosion
- Improvement in water quality
- Reduction in water runoff
- Wind reduction
- Temperatures are not so extreme

## Quality of Life Benefits from Horticulture

- Improved physical wellbeing – shade reducing excessive heat or cold
- Improved sense of psychological wellbeing - e.g. stress reduction, attractive environment promotes calmness of thought, enjoyment of surroundings
- Therapeutic benefits from undertaking gardening
- Leisure, sport and recreation opportunities increased
- People may become fitter and more active
- People may become more involved with local community - build social networks
- Greater sense of pride through involvement means less vandalism
- Reduced risk of accidents in the environment

Every one of these benefits offers opportunities for employment linked to growing plants in order to provide that benefit.

## SCOPE OF WORLD HORTICULTURE

In 2009 (source FOASTAT):

- World fruit production was 635 million tonnes
- World vegetable production was 1.811 billion tonnes
- 42% of the world's fruit and vegetable production was in China and India
- The majority of fruit and vegetable production was through large scale farms (large acreage usually using mechanised and sophisticated farming techniques).

Some countries export more horticultural produce than they import, whereas others import more than they export. Some are strong net exporters of certain things but net importers of other things.

In 2009, countries including Russia, the UK, Germany and France were heavily dependent upon imports of fruit and vegetables. Other countries including Argentina and the USA were importing a similar amount as what they exported. Yet others including Chile, Spain, Italy, the Netherlands and China were exporting more than they imported.

The issue of food security has been of growing concern around the world. Indeed, the Food and Agriculture Organisation of the United Nations (FAO) has identified food security as one of a number of areas of concern. It calls for suitable policy and regulatory

framework to be in place so that host countries which invite foreign investment into their agriculture industries are able to maximise development benefits and minimise the associated risks. They call for international consensus on Principles for Responsible Agricultural Investment (Source: [www.fao.org](http://www.fao.org)).

Changes in weather patterns (e.g. extended drought in the USA and Russia in 2012) can have a big impact on food production for a period, creating a reduced supply, and increasing demand and food prices.

Around one third of food produced in the world each year is either unfit for human consumption; or is wasted. The percentage of waste is similar in developing countries to what it is in developed countries.

Amenity horticulture, including the nursery, turf, and cut flower industries was estimated to have an annual turnover of \$898 million in Queensland, Australia in 2009/10 (Source: A Profile of World Horticulture, published in 2012 by the International Society for Horticultural Science: [www.harvestingthesun.org](http://www.harvestingthesun.org)).

All these facts give an idea of the huge scale and breadth of the horticulture industry in the twenty-first century.

## THE HORTICULTURE SUPPLY CHAIN

Whenever a plant is grown for a purpose, there will be a sequence that flows from the initial creation of the plant through to an end point where all signs of that plant's existence have been dispersed.

The following is an example of what may happen with a fruit crop:

1. A nurseryman propagates the plant
2. An orchardist grows the crop
3. The orchardist's production is supported by a range of other inputs (e.g. the stock agent who supplies pesticides and fertilisers)
4. A picker harvests the fruit
5. A packer or factory worker may pack and/or process the harvested fruit (e.g. it may be converted to a preserve)
6. A distributor stores the produce
7. The product is transported long distances by bulk transport (e.g. air, rail, or sea)
8. A distributor moves the product to a wholesaler and/or retail customer
9. A consumer purchases the product from the retailer
10. Any excess is collected and disposed of in waste (e.g. composted)

From this example, you can see that the role of the orchardist may be only one of many jobs involved in the production and distribution of a fruit crop.



**Whenever a plant is grown for a purpose, there will be a sequence of production.**

## CHAPTER 2 DISCOVERING YOUR PATH

The decisions you make today always affect opportunities that emerge tomorrow. There are an infinite number of choices you may make about your career path; and an infinite number of paths you can set yourself on.



**Many of the industry's most successful professionals may start out in a lowly job, in a sector that is not their first choice.**

- Some of the early decisions you make can either develop a broad foundation, preserving your ability to move from one sector of horticulture to another, as your career progresses.
- Sometimes early decisions seem good at the time, but may set you on a course to become too much of a specialist; and in doing so, limit your ability to move to other sectors of horticulture if your area of specialisation no longer offers good work opportunities.
- Some paths are easier to get a start with than others.
- Often getting a start in any area of horticulture is the most difficult thing. Many of the industry's most successful professionals may start out in a lowly job, in a sector that is not their first choice; but having got a start, and with some experience behind them, they find opportunities to move up and into other industry sectors are far easier to find.
- Many people do not appreciate is that most paths have many different entry points, and getting started is never as simple as just getting the right qualification. In this industry, studies are only as good as the knowledge and skills they give you; and even knowledge and skills are not going to get you into a good career, if you do not have the right attitude, persistence and a little luck.

The first and most important step in finding a satisfying career path is to get started in the workplace. Get a job, any job, as soon as you can. It doesn't matter too much what your first job is. It might be pulling weeds or mowing lawns or picking fruit. It doesn't even need to be paid. It may even be a volunteer job with a conservation or land care group. Anything that gets you some experience is a move in the right direction.

If you are studying at secondary school or university, still try to do some part time work at the same time. An education is always important, but the majority of people who study something will end up working in something different to what they studied. Even doing volunteer work or starting a small business while you are a student can have a major effect upon your prospects after you complete your studies.

Experience and learning acquired through part time employment are often just as impressive to a future employer as the qualification you are studying. Either one without the other may put you in a less advantageous position in the future.

Once you have a job keep looking for opportunities to improve your situation, whether in the existing job, or by moving on to something different. You will learn skills in every job you do, even if they are not skills you recognise at the time. As you progress through your career you will build on your skillset and develop new skills. Even if you change career you will often still be able to draw on skills you have developed in a different career, just in a different context. For example, if you start working on in a retail garden centre, you will develop skills in identifying plants, which can be applied to a job as a landscaper or gardener elsewhere.

## THE BIG QUESTIONS

### Do you know yourself?

Consider your personality, persistence, changeability, skills and talents, passion, susceptibility to stress; take stock and assess your own potential, realistically.

### Do you know the industry?

Get to know what it takes to work in the sort of industry sectors you are targeting. Make sure you understand the down side of that industry, and whether you are realistically suited to dealing with the down side. Do not fool yourself into thinking there is no down side. No job is perfect; and every industry has a down side.

### Are your expectations and goals realistic?

Goals are things we set so that we attain a certain outcome – it is a checking system; we set a goal and when the time frame for that goal has elapsed, we check back to see what we have actually achieved - compared to what we wanted to achieve. Setting goals too high can result in disappointment for some – on the other hand some people thrive on achieving what may appear to be unrealistic goals.

### A simple goal may be to 'get a certain job' – realistically you would need to ask yourself:

- Am I suited to this job i.e. do my skills suit the position and will I fit into the organisation's culture?
- Am I suitably motivated to get and keep this job?

- Am I open minded and keen to learning new skills?
- Am I dependable?

It's not difficult to get work; it's just sometimes difficult to get the type of work you want.



**The first step in getting a job is to develop a Realistic Attitude!**

Some people have very set ideas about the job they want, others are really undecided. The first step in getting a job is the same for both types. In fact anyone of any age, sex or level of skill needs to take the same first step:

The first step in getting a job is to develop a **Realistic Attitude!** Realistic goals are based on a sound understanding of what constitutes a successful career for that individual, of one's strengths and weakness and current marketplace trends, and of likely changes to which one must adapt. Because very few people begin in the same job they want to finish in, a career

must be realistically seen as something that evolves or develops. You will probably not begin in an ideal position, but with careful planning, you can probably improve your position in your career as time goes by.

**To develop Realistic Expectations:**

- Don't expect to start at the top.
- Don't expect to like everything about your job at first.
- Be prepared to make the best of your situation and maintain a positive attitude.
- Be prepared to accept any job in your field at first if you cannot get your ideal job or any job at all if you cannot get a job in your chosen field. If you are in employment, even though not in your chosen field, you are developing your career further than you would be if unemployed (or not studying).

**Are you physically and mentally capable?**

Not everyone is suited to being a rocket scientist or an Olympic athlete!

**Physical Suitability**

Some jobs will require the candidate to have certain physical attributes to be suitable for the job - for example a tree surgeon climbing a tree, a propagator working with delicate plant tissues, a landscaper moving heavy materials, or a garden designer producing precise drawings. Where appropriate, before appointment to a position, a medical doctor should examine the applicant and inform the personnel officer/department of any conditions which might affect the performance of the job (examples follow).

Physical activities and characteristics to be considered in determining a person's suitability for a job include:

- Muscular strain
- Constant walking
- Constant standing
- Constant sitting
- Constant stooping
- Right handedness
- Left handedness
- Hot working conditions
- Cold working conditions
- Damp working conditions
- Exposed working conditions
- Acute hearing
- Acute vision
- Discrimination between colours
- Dry (non-sweaty) hands
- Food handling safety (sinus, sniffles, coughing)
- Dusty work conditions
- Indoor work
- Nervous strain
- Climbing
- Risk of falling

### **Mental suitability**

Some jobs will require specific mental capabilities to be able to complete the

required tasks. For example an engineer will need to have a sound understanding of physics, mathematics, spatial awareness, and so on, that some people just might not be capable of. Other jobs will require someone who has attention to fine details, such as an accountant; or the capacity to be patient, such as a supervisor or teacher. Other jobs require particular personal attributes, such as leadership skills, good decision maker, problem solving abilities, an ability to think logically, negotiating and mediation skills, etc.

### **Money, Security or Passion?**

Few people find it all. The reality is that almost everyone has to make compromises in their careers.

Consider your values and what is important to you in a job.

Why do you work? Is it primarily to earn money so you can survive? Perhaps work gives you a sense of purpose? Maybe you have altruistic reasons such as helping others and making a contribution. Some people look for other things from a job; perhaps social reasons (interacting with other people), maybe they are pursuing a passion, or something else. For some, job security or flexibility of hours may be more important than anything else.

### **Thinking short, medium and long term**

Always think ahead. Industries do not tend to disappear, but jobs within an industry do disappear, and new jobs emerge. You need to stay in tune with your industry, alert to changes, and plan how you can adapt to changes as they come along. Keep your options open, and prospects broad. Keep learning. In today's world you cannot afford to think of any career as something you simply learn skills for and then use

those same skills for your entire career without any improvement or change.

## Self employed or working for someone else?

Certain industries are dominated by self-employed people, while others are dominated by large enterprises.

If you are attracted to an industry where most successful professionals are self-employed you may have difficulty advancing your prospects unless you are inclined to operate your own business. Similarly, if you want to work in an industry where very few people are the owners, and almost everyone is an employee, you will need to be comfortable working within a large organisation; and perhaps dealing with politics and bureaucratic processes that may not be so prevalent in self-employment.

## Are you suited to working for yourself?

Not everyone is suited to running their own business. Some people don't have the knowledge or skills to be successful at business but that's not the main problem; many people simply don't have the personality, the drive or the will to run their own business.

## It is not always as easy as it seems.

Most people work for someone else. In doing so, they don't get to choose what they do at work: their boss tells them what to do. For anyone in this situation, the idea of working for themselves, and making their own choices seems easy. The grass always seems greener on the other side of the fence. Without the experience of self-employment, there is no real awareness of the negative aspects of running your own business; but as with most things

in life, there are both advantages and disadvantages to self-employment.

## Being in business:

- Can be stressful
- Does not suit everyone
- Involves different risks to the risk of being an employee
- Sometimes requires you to work longer hours
- Requires a personality, commitment and attitude that may be different to what being an employee requires.

If you value your financial security and leisure time, a small business might not be for you.

If you have heavy demands on your time from family and other commitments don't go into business unless you and your family are prepared to give up some of these things.

If you sometimes find it difficult to focus your thought; or if you don't organise yourself really well, a business might not be for you.

On the positive side, owning your own business can:

- Provide potential to earn more; but also the risk of earning less.
- Enhance your job satisfaction
- Provide you with financial rewards (if it is successful)
- Provide you with flexibility in the future (after the business has been set up well)
- Allow you to do things your way.

## CHAPTER 3 HORTICULTURAL EDUCATION

Some employers in the horticulture industry want all their staff to hold qualifications. Others feel that “qualified” employees are sometimes set in their ways and are often incompetent. They also may lack the willingness to learn or to adapt to change. Some also say employees with qualifications seem to know very little.

Why is this? The problems can be traced back to horticultural education in Australia over recent decades. Many providers of horticultural education are more driven by politics, profits and further funding, than education. In reality much more time is spent on passing audits and complying with government funding requirements, than

is spent on educating people. This extends to both the private and public sectors. People who know little about the psychology of learning now make decisions on education, while teachers who have studied education for years are no longer given the power (and sometimes the resources) to practice what they studied.



**Unfortunately, much more time is spent on passing audits and complying with government funding requirements, than is spent on educating people.**

## EDUCATION TODAY

Most educators today need to be results driven, rather than driven by the urge to teach - this is because the amount of students that pass courses often directly affects further funding. If your school or training organisation shows low pass rates, you may not receive further funding. This may seem like a sound approach at first glance, but there are two immediate problems associated with this:

1. Students may pass their course but may not be competent or well-educated. In fact they may do very little work at all towards their studies, or attend very few classes - but still be awarded a pass in order for the organisation to retain funding.
2. Educators spend so much time complying with administration and bureaucratic tasks set by funding bodies, that there is little time left to offer a quality education to its students.

This is a 'catch 22' situation:

- Use your time to give students a sound education and leave little time for bureaucracy and administration - and your funding is cut!
- Spend less time on educating your students but comply with administration and bureaucratic requirements of the funding body – your students probably won't pass, your results will likely be down - and so your funding is cut.

For the horticulture industry though the worst scenario is:

Pass your students indiscriminately (irrelevant of their results or attendance records), do all your administration and bureaucratic tasks competently and retain your funding - however you have produced mediocre employees as a result! All losses are absorbed by the students and the industry in general – skilled workers become even scarcer.



**Students may pass their course but may not be competent or well-educated.**

## HOW THINGS HAVE CHANGED

Four decades ago a 'Diploma in Horticultural Science' would require 4000 hours of study covering plant sciences, plant identification, and general horticulture and at least 2000 hours of hands-on work (spread over many sectors of the horticulture industry). An apprenticeship took 4 years to complete. Upon qualifying from your diploma or apprenticeship, you were able to work as a horticultural assistant, not as a horticulturist – it took several years of experience before you were considered a 'qualified horticulturist'.

Today, a diploma is awarded (in many cases, by many government-funded institutions or organisations) after just 6–12 months study (often comprising no more than 700 hours - or sometimes even less) with little hands-on experience and backed up with very little science, but often accompanied very high expectations of the students upon graduation!

This trend is not helping the industry. The horticulture industry is undergoing a revolution, it needs employees that are able to meet the challenges; people that can grow and develop as the industry does and become the developers and leaders of the future. It needs people that are passionate about horticulture and very knowledgeable - those that can meet the demands of the industry and drive it forward. It does not need people that have been forced into studying horticulture to meet social service demands (e.g. in order to retain their social security payments) or through parental pressure. Horticultural education should not be seen as a 'place of last resort'!

## EDUCATIONAL EXPECTATIONS

Education is a foundation that assists you to make educated decisions. It teaches you how to think things through, to analyse what is presented to you, to make informed decisions using the skills and the knowledge you have gained, and how to build on your basic education - to enhance your career.

Although education is a great foundation to starting a career, don't expect a course to teach you everything! Good education should only ever be seen as a foundation. You cannot retain everything you learn in a course. You also do not

learn everything you need to know by doing a course – this takes time and experience as well as education. However, a good course will provide you with underpinning knowledge and skills and should help you to develop research skills i.e. ways to find out the things you need to know in the future - once you have finished your course.

If you have thorough learning in the fundamentals of horticulture, you will have the ability to adapt those fundamentals when you encounter a new plant, product or process. The plants we grow and the way we grow and market them is changing faster than ever. It is impossible to predict what cultivars or products will be most popular in 5 years' time. However, a person who has ALL the fundamentals will encounter new things and have the ability to understand them and remember them faster than someone who has not acquired the same foundation. Staff who have broader based and more in-depth foundations will see the possibilities (and be more likely to rise to the challenge) every time something changes in the workplace. Good education makes the employee more productive and adaptable - whilst qualifications may be little more than something to put in a frame on the wall, rather than a grounding to build on for a future in this career area.

## THINGS YOU MAY OR MAY NOT HAVE THOUGHT OF OR REALISED ABOUT EDUCATION

**Good education goes into long-term memory.**

The Australian Training System is easily abused by testing short-term memory. You cannot fast-track learning. Most

people only retain and properly understand things by encountering them repeatedly, and in different ways, over a period of time.

You can show someone something, test them and declare them competent all on the same day, in a short space of time, and that may be all that is required to award someone an accredited training package qualification.

**The traditional way of planning for and providing education is fundamentally flawed.**



**Often the course being delivered is based upon a need that was seen many years earlier.**

Traditional education (e.g. TAFE's, RTO's and Universities) commonly take many years from identifying a need for training to when they commence delivering on that need. Commonly, after determining the need, committees are set up, research is conducted,

funding is sought, curriculum is written, tenders are called, course notes are written and finally funding is arranged to deliver a course and students are recruited. Often the course being delivered is based upon a need that was seen many years earlier. Does this make any sense in today's rapidly changing world?

**Diversity is REALLY important.**

Individual people with diverse educational backgrounds can bring diversity to the workplace. A group of people that have all studied at various (different) institutions also bring diversity of ideas and differing ways in which to approach tasks to the workplace – with combined impact. This is good for a business and good for the industry. If, on the other hand, you employed a group of people who had all studied the same course, you would discover that the range of ideas and approaches shrinks – this is not good for the workplace or the industry. It may be attractive to politicians and bureaucrats to create “standardised” “national” training but it is diversity that drives the world today. We need a lot of different courses teaching different things, through different educational providers - to produce graduates who approach problems in different ways.

**Distance education is more cost effective and flexible than classroom based education.**

Although this wasn't always the case – consider the following:

- A classroom-based course requires physical infrastructure (e.g. buildings, equipment), a dedicated teacher etc. and must be timetabled to occur at a particular time. Students have travel costs.

- A distance education course doesn't need the above - and with modern technology it can connect students and teachers over the internet. Students can watch videos, take virtual tours of nurseries and farms all over the world, conduct research using the internet, conduct specifically formulated practical set tasks, submit assignments in a flash, and receive marked work back as soon as it is marked. AND they can study at any time of day or night that suits.
- Each student is treated as an individual. Distance education used to be chosen because it was more convenient; but today people are choosing it because it is better and provides more one on one interaction with their tutors. Many students wonder how they will cover practical skills (horticulture being so practically based) when they study through distance learning. Institutions that understand the horticulture industry (and how students learn) spend decades developing and redeveloping set tasks that cover practical skills – better distance educational providers have a proven record of producing graduates with well-developed practical as well as theoretical knowledge.

### **Traditional horticultural education is in crisis, but other alternatives are growing.**

- Horticulture courses have been shrinking at TAFE's and Universities over recent times. Funding has come under pressure. Colleges are expected to produce more graduates with no extra funding.
- Education driven by politicians and bureaucrats more than teachers - we now talk about outcomes, licenses and lifelong (formal) learning, where we used to talk about learning to provide a foundation to start learning on the job.

- People expect courses to give everything that is needed to walk in and start doing the job, but that shows a fundamental misunderstanding...What should employers expect? The value of an educated staff member is rather not that they know it all, but that they will learn it faster.

### **New learning options have been developing.**

It is not all doom and gloom - on the bright side new learning options have been developing in horticultural education, as well as other areas, for example:

- The renowned RHS Courses (Royal Horticultural Society) are now being offered by Distance Education providers worldwide. They offer a prestigious qualification from an internationally recognised and well-respected horticultural institution.
- Alternative education is booming – for example the ACS network, the Permaculture network.
- Garden Shows on TV are more prevalent and popular than ever. Shows like Gardening Australia, Better Homes and Gardens, and Garden Gurus have been educating the broader Australian public. There are many examples of similar types of shows in other countries. Home gardeners, as well as new people entering the industry, are developing a broader and deeper understanding of horticulture than ever before.
- Social networking - gardeners around the world are connecting and sharing over Facebook™ and other social media.

## CHAPTER 4 AMENITY HORTICULTURE

The amenity horticulture industry has evolved immensely over the past hundred years. Whilst some of the job titles remain the same, the nature of the work has changed as new innovations and technologies have been incorporated. For instance, these days, a gardener would be expected to understand how to operate and maintain an irrigation system as they have become commonplace in public and private gardens. Whilst a general understanding of horticultural principles and practices is required for most positions in amenity horticulture, the depth of this knowledge varies with the job role.



**Some job titles remain the same in the amenity horticulture industry, while the nature of the work has changed as new innovations and technologies have been incorporated.**

### GARDENER

Gardeners work in gardens maintaining the landscape undertaking jobs such as: controlling weeds, pests and diseases; pruning, mowing, fertilising, mulching, watering, cleaning sprinkler heads, using machinery, staking, raking or blowing leaf litter, making compost, removing and replacing dead plants, lifting and dividing bulbs, cultivating and aerating soil, and simple handyman jobs such as repairing garden features including paths, fences and walls, or

maintaining them through painting, staining, etc. The tasks which a gardener might do can vary greatly from one garden to the next. Tasks can also be seasonal, so the work undertaken can vary from week to week.

#### Where Do They Work?

Some gardeners may work alone or perhaps with one other person; others can work as part of a small team, headed by a supervisor.

Small and medium size private gardens will often employ a “contract gardener” to visit weekly or fortnightly to do the required work. This type of gardener is commonly self-employed, and can earn a very good income if they are a productive gardener and adequate business person.

The managers of parks, commercial properties (e.g. industrial estates, shopping centres), and other large properties, may employ permanent full-time gardeners. This type of gardener may not have to deal with issues associated with running a small business; such as travelling from job to job, making up for time lost during wet weather, finding and managing contracts, or organising and maintaining tools and equipment. Their work may be more secure, and their lives less complicated; but the wages for this type of job can be minimal unless they rise to a supervisory or management position (in which case, income rises, but so does the complexity and stresses associated with the job).

## Opportunities

Knowledgeable and skilled gardeners are often hard to find. There are plenty of people who will prune roses, remove weeds, spray pests and mow lawns; but there can be significant problems associated with doing any of these things the wrong way. Many clients who employ gardeners are oblivious to a gardener doing the wrong thing - but someone who knows how to do a good job will gradually build credibility, attract better jobs (in every respect), and secure a much better long-term career.

## What Is Needed?

To be a really good gardener, you need:

- To be able to identify at least 500 of the most commonly cultivated plants in your locality
- Knowledge of different plant groups and their growth habit
- An understanding of the principles of plant growth; managing soil, fertiliser, water, light
- Knowledge of how and when to plant different plant species
- An ability to quickly differentiate weeds from garden plants
- A sound knowledge of common garden pests and diseases - and appropriate methods of treating them
- An ability to properly prune common garden plants and awareness of the best times to do so
- To have an understanding of turf maintenance; mowing, repair, fertilising, aerating, weeding, pest and disease control
- An understanding of propagation practices
- To be able to safely and properly use garden tools, chemicals and machinery

There is also a lot of focus these days on ‘sustainability’ and the gardening industry is very much a part of this. Gardeners too need to stay abreast of the latest developments in order to grow their business base or employment opportunities.

Some gardeners learn this through a course, others learn it on the job; but most often, the best gardeners learn by studying for at least a couple of years and working for at least a year alongside a highly skilled and experienced gardener. A good quality course today will also include sustainable gardening methods and sound environmental approaches.



**A tree lopper is someone who removes trees, but might not understand so much about how to grow or repair them.**

## ARBORIST

Arborists are specialists who look after trees. This work can involve removing sick or damaged trees (or parts), removing or chipping prunings, controlling the size and shape of trees, repair of trees (e.g. bracing, propping, cabling branches to prevent them breaking), accessing parts of trees by climbing or with a travel tower, planting new trees, transplanting large trees, controlling and removing unwanted roots, controlling tree pests or diseases, or developing tree management plans.

Trees in urban areas can often become a problem. Branches can fall onto power lines, buildings or other structures. Roots can damage pavements, fences, and building foundations, or block drains.

- A tree lopper is someone who removes trees, but might not understand so much about how to grow or repair them.
- A tree surgeon will understand more about how to grow trees and care for their health but, in addition, still have all the same skills of a tree lopper.
- Some people in this field may specialise. For example, stump removalists may provide a service to dispose of large stumps after the tree is removed. Stump grinding machines may be used for this. In some instances a stump may need to be dug out or burned. Removing a stump can result in soil subsidence, so understanding all of the implications of dealing with “leftover” roots can be a significant area of study.

## Where Do They Work?

Arborists often work for an arboriculture business, tree removalist, or tree surgeon. Some are employed by municipal government or other public authorities. Some work in forestry and others in private enterprise. Many will start their careers climbing trees but often with age this type of work can become increasingly challenging. Later in their careers, some move on to being a consultant, or manager, or conduct tree inspections and write tree reports for councils. Others may leave arboriculture and find work in other areas of horticulture.

## Opportunities

Non-climbing arboriculture assistants are employed to work ropes, lower branches to the ground and clear away branches. They may also operate a chipping machine. This type of work is less skilled than climbing, does not pay as much, and may be an easier job to get when starting out in this industry.

A skilled climber is always in demand, and can earn very good money however one should always consider whether this is a job you would plan to do for decades, or for a lesser period - as a stepping stone towards something else.

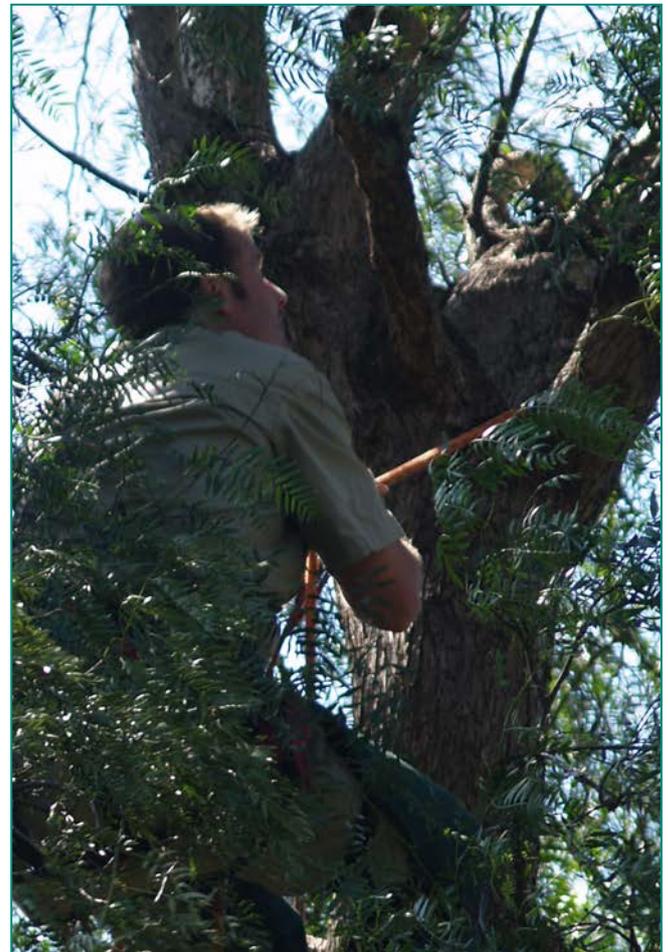
## What Is Needed?

Climbing is dangerous work if you don't know how to do it properly (and use appropriate climbing gear). Some arborists learn to climb on the job. Others learn by doing abseiling or rock climbing as a sport. Others may learn through a trade apprenticeship or specialised course.

Arborists also need to understand trees. Even a tree lopper, who is only removing trees, still needs to understand what woods are safe to

climb on, and what should not be climbed. Different species of trees are stronger or weaker; some are prone to break, and others are not.

A good arborist needs to be able to identify plant pest and disease problems (particularly wood rotting diseases), and differentiate between perhaps 100 or more of the more commonly grown species of trees in their locality. They should also know enough about plant taxonomy to determine the plant family a tree belongs to - when they encounter a species they are unfamiliar with.



**Tree surgeons not only know how to remove trees, but also understand all about how to grow trees and care for their health.**

## GROUNDSMAN

A groundsman is a person responsible for maintaining landscapes, gardens, or sports venues, either for appearance or for the functionality of the area. In some schools and institutions, they are referred to as “horticulturists”.



**Groundsman service small or large sized companies to ensure that their grounds are maintained to the highest standards.**

A groundsman will be required to carry out certain types of responsibilities to improve appearance and maximise the utility of the area. These tasks may include:

- Planting and/or watering trees and shrubs
- Cutting away dead or excess branches from trees or shrubs (pruning/trimming)
- Mowing and cutting lawns

- Being responsible for the cleanliness and maintenance of pathways, driveways, car parks, areas around buildings, and other public areas
- Installation of water and/or garden lighting systems
- Construction and maintenance of fences, terraces, pools, fountains, planters, burial sites, and other grounds features
- Applying pesticides, fungicides, weed killers, fertilisers, or other chemicals to the soil, weeds, plants, trees, shrubs, or any other surface that requires it
- Planting seeds, bulbs, grass, foliage, flowers, and other plants for the beautification of the gardens and landscape facilities
- The maintenance of plants and turf through applying mulch, aerating, weeding, grubbing, removing thatch, fertilising, or pruning.

Groundsmen may undertake small construction jobs by following a site plan created by a landscape architect, or they may create their own design and present it as an alternative option if they have the skills to do so. They offer service solutions to small to large sized companies to ensure that their grounds are maintained to the highest standards.

### Where Do They Work?

Because groundsman normally work on outdoor environments, they are generally exposed to variations in weather conditions, as well as noise, pollution or risks that may happen on-site. The job can be physically intensive and a groundsman should enjoy working in this type of environment. Ideally, a

groundsman involved in sportsgrounds should like the type of sport his work is based on.

A good groundsman, therefore, will be capable of undertaking a wide variety of physical work tasks and be willing to work long hours. They should be fit and able to cope with bodily stresses such as prolonged standing, sitting and crouching. They need to push, pull and position tools, machinery and construction materials, lift heavy loads, and work on ladders. They must be comfortable with heights, working on a variety of different surfaces, and different types of environments.

## Opportunities

Given the nature of the work, groundsman spend most of their time in outside areas. The work might be part time, full time, contract work, or just a temporary seasonal job. The most common areas include:

- Sports facilities such as golf courses, tennis courts, soccer/football fields, cricket fields, bowling grounds, athletic tracks and swimming pools.
- Commercial and private sectors such as universities/schools, government buildings, parks and reserves, apartment complexes, farms, cemeteries, malls, private properties/homes, or other commercial grounds.
- National parks, gardens and landscaped areas.

## What Is Needed?

Given that many institutions have begun to move away from methods which may cause atmospheric pollution, and the

use of harsh chemicals which may harm the environment, groundsman today will need to have knowledge of integrated pest management (IPM) techniques. Such programmes incorporate the use of biological control methods, natural predators, organic sprays, and control rather than eradication. A good groundsman will have the qualifications, knowledge and experience to carry out IPM tasks in the most cost-effective and efficient manner.

It is of great importance for a groundsman to have certain practical skills and have a good horticulture understanding in addition to profound knowledge of pest control and weed mitigation when working with chemicals.

Because of a growing demand for good groundsman, it is important that they become familiar with the use and maintenance of different types of machinery and other technologies related to the maintenance of grounds in order to not only carry out projects, but to ensure high standards of work.

Some of the tools and machinery involved in tasks groundsman might have to relate to include: axes, lawnmowers, leaf blowers, saws, hammers, hoes, spades, edgers, hoses, sprinklers, shovels, rakes, rotary brushes, hedge clippers, shovels, pruners, shears, and other garden tools, as well as vehicles and powered equipment such as tractors, snow blowers, twin-axle vehicles, chain saws, electric clippers, sod cutters, and electric pruning saws.

Therefore, a top groundsman will know how to identify the correct type of tools and size of the machinery to be used in order to complete both large and small-scale jobs.

## PARK RANGER

A park ranger, or forest ranger, is a person committed to protecting and preserving national, state, provincial or local parklands. The ranger's role is to manage, supervise and control nature reserves, scenic areas, historical assets, and other recreational sites.



**Being a park ranger requires a high level of motivation, love for working outdoors.**

Rangers are responsible for making sure that the activities held in both the natural environment and the recreational area that the public has access to, are in balance. Their goal is to encourage visitors whilst simultaneously promoting awareness, protection, and care for the natural environment so that it can be preserved and enjoyed.

Being a park ranger requires a high level of motivation, love for working outdoors, and an immense passion for nature. It can provide some exciting challenges that may turn out to be very rewarding for those working in this field.

There are many opportunities for people who wish to pursue a career as a park ranger. As the role of park ranger has evolved over time, the responsibilities of rangers have become more and more specialised. However, all rangers share the same intention which is to protect the natural environment and its inhabitants for the benefit of future generations.

A park ranger will be able to carry out a number of practical duties such as:

- Maintaining favourable wildlife conditions
- Managing visitor and exhibition centres
- Managing historical, cultural, and natural resources
- Protecting the public and wildlife by patrolling sites, and undertaking search and rescue
- Ensuring safety of public access areas, and performing continuous safety inspections
- Monitoring wildlife by devising and conducting surveys

- Implementing projects to conserve nature based on protection and creation of natural habitats
- Educating and creating awareness of environmental conservation
- Making minor repairs to gates, fences, stiles, walls, footpaths and picnic tables
- Maintaining and creating trails for visitor use
- Providing information and service to visitors, leading guided tours, and working with volunteers
- Identifying and controlling weeds, pests and animals that might be threatening to native plants and animals

## Where Do They Work?

Rangers may work in urban, suburban, or rural areas such as:

- Conservation and recreation including: wildlife parks, marine parks, game parks, national forests, sanctuaries, campgrounds and other recreational areas
- Historic buildings, ancient battlefields, archaeological properties, museums
- University or government research centres
- Department of Agriculture

## Opportunities

The working space of a park ranger will depend on the type of environment they are allocated to manage, as well as the duties they are required to perform. The differences within their duties will depend on their job position, the size of the site, and the specific job description.



**Rangers may work in urban, suburban, or rural areas such as Agriculture.**

The activities related to a park ranger's job are mainly performed outdoors, but as they assume more managerial responsibilities, they may find themselves spending more time working in offices. Some qualified park rangers may be allocated to a different part of the country whereas others remain stationed in only one area. However, they all endorse the spirit of teamwork when it comes to being in charge of protecting the parks and the people who visit them.

Being a park ranger can be quite a rewarding and inspiring career choice, but there are certain risks involved in a few of the duties they might be exposed to. It is important to have some knowledge of the use of chemicals and other safety matters as you will possibly be dealing with hazardous materials or natural resources such as toxic chemicals, animal faeces, or fire suppression or back burning.

Because of a continuous exposure to animals and nature, there is a risk of getting bitten and obtaining transmitted parasites or diseases, as well as allergic reactions to certain plants or flowers while attempting surveys or habitat restoration.

Since it is a very popular job, competition for positions is strong, especially within the sciences and conservation area. Most of the jobs that become available are advertised in the newspapers or on employment websites, but a lot of jobs tend to come up internally and may not be widely advertised. It is therefore worthwhile being involved in organisations of interest in order to have a better chance of finding out that a new job opportunity has arisen.

## What Is Needed?

Park rangers are mainly employed by government agencies. It is useful for potential employees to

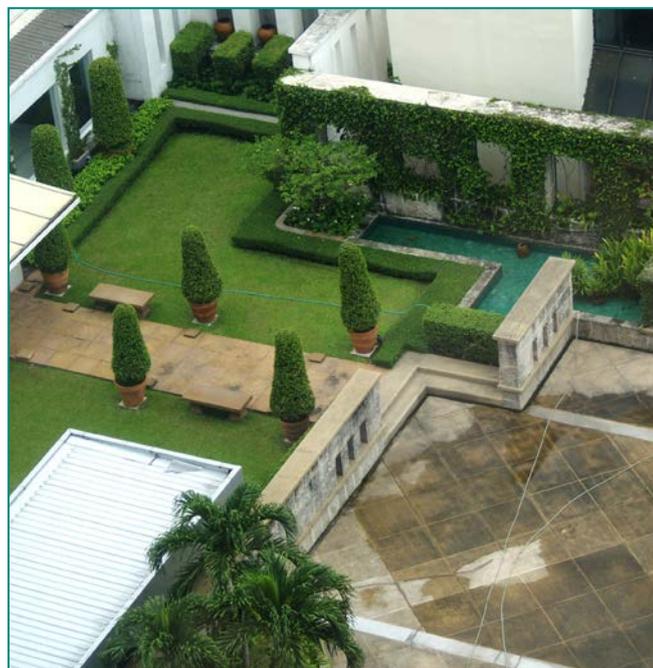
have a broad foundation in certain qualifications that will allow them to carry out their responsibilities and duties in an assertive manner. They will be required to have an adequate understanding of the cultural side of different sites and their resources, as well as a broad vision on what conservation and management is involved. Suitable knowledge may include subjects such as natural resource management, natural or earth sciences, history, archaeology, anthropology, park and recreation management, law enforcement/police science, social or behavioural sciences, museum sciences, business or public administration, or sociology.

Employers usually require applicants to have some park or nature-orientated experience. They will preferably be required to have knowledge in natural or cultural history, fish or wildlife habitat, botany, environmental science, geography, natural resource management and park management, recreation management, recreational use of public lands and facilities, or any other park-related labour, as well as interpersonal relations skills in dealing with the general public.

Remuneration as a ranger can vary but managers and specialised positions can earn a more comfortable salary. Some park rangers may move within different parts of the country and may have the opportunity to become a forest officer, fisheries officer or land protection officer, research program coordinator, or if the opportunity arises they may be able to work as conservation officers with local councils. In many cases, park rangers may progress into professional science positions or general management if a certain level of expertise is obtained.

# LANDSCAPE DESIGNER OR LANDSCAPE ARCHITECT

Lots of different terms are used loosely to describe people who design landscapes. A landscape can be any outside environment, from a garden, to a park, a roadside area, a car park, a roof top or a reclaimed mine site. A landscape normally has plants in it, but not always. It may be a relatively uncomplicated design that contains uncomplicated structural features such as a picket fence or gravel path; but in some situations, a landscape can contain very complex components, like a bridge that is strong enough to carry the weight of a car driving over it, or a large automated watering system with hundreds of water outlets.



**Landscape architects, like engineers, have the capacity to formulate and deal with very complex designs.**

Landscape architects, like engineers, have the capacity to formulate and deal with very complex designs that may involve complex mathematical calculations, and apply their understanding of construction. However, a landscape architect may not necessarily have as much understanding of plants as a garden designer does. The garden designer draws plans for a garden to create a layout that is both functional and aesthetic and almost always has planting design at its core. There are many other types of landscape designers, for example:

- A playground designer produces a design that creates a functional playground. They need to understand how to select and combine components to enhance possibilities for play.
- A permaculture designer needs to understand the principles of permaculture, and both plants and animals, in order to create a landscape that is productive and self-sustaining.
- A water garden designer needs to understand how to contain water, and create a water environment that is ecologically balanced and aesthetically pleasing.

## Where Do They Work?

Landscape architects usually work on more costly projects; such as public gardens, commercial and industrial properties and large private gardens.

## Opportunities

Some government departments, as well as consulting engineers, planners and even large landscape contracting firms, may employ landscape architects on

permanent staff. Landscape architects may find more work available when governments are spending big, and less when tax revenue is under pressure. Many landscape architects are self-employed, or work in a small business with one or two partners. Landscape architects can earn a great deal more than garden designers, but the amount of work at that level is always going to be far less than for landscape designers.

Landscape architects can become more viable if they diversify the services they offer, perhaps into things such as environmental assessment, media, teaching or consulting.

Landscape design work has increased significantly in recent decades, driven by two things:

- Municipal governments requiring landscape plans to be submitted and approved on building projects.
- Social constraints – i.e. both partners in a household work therefore they don't have time to do things around home, as a result all home services are in bigger demand - including garden design.

Many garden designers are self-employed, and often garden design might be only a part-time occupation. Garden design is often coupled with garden maintenance as it is relatively easy to build up a base of clients by firstly maintaining their gardens and then offering design work as it is required. Word of mouth then extends the design side of the business over time. Some do build a very viable practice doing garden design only, but that usually requires some effective marketing; perhaps building an alliance with a plant nursery, landscape contractor or supplier of landscape

materials. Some even work for a firm of landscape architects to provide the planting designs.

## What Is Needed?

Landscape architects usually undertake university level studies; either a bachelor degree or post graduate qualifications in landscape architecture. Landscape architects often move into this field following studies and/ or working in related disciplines such as planning studies, engineering, environmental science or horticulture.

Landscape designers and garden designers need the following:

- An ability to draw a garden plan (either on paper or on a computer)
- An ability to survey a site and collect all relevant information, including topography
- Ability to identify several hundred plant species that can be used in a design
- An understanding of how plants grow and what is appropriate to plant under what conditions (e.g. soil, light, water, wind, heat, cold, etc.)
- Knowledge of hard landscaping components and how to design (engineer) them and how to use them in a design
- Most landscape designers start out by either working on the job, or more commonly doing a certificate or diploma course. The piece of paper is just the start with many courses that may offer little if any practical skills or intensive knowledge of plant species and their correct culture. This should be part of a well-constructed course.

# LANDSCAPE CONTRACTOR/ LANDSCAPE TRADESMAN

Landscape contractors and tradesmen actually create the landscape. Sometimes they may design it as well, and sometimes they do not. Designing a landscape is a job that requires a mixture of artistic and practical skills, but not necessarily the ability to do the planting, build a rockery or fence, install a drain or lay paving. The physical construction of a garden is the job of the contractor, and their work teams.



**Designing a landscape is a job that requires a mixture of artistic and practical skills.**

Constructing a landscape is a job that has a beginning and end and because of that fact, most people who build the landscape, will work as a contractor or for a contractor. This type of work is often called 'hard landscaping' because it involves working with hard materials such as bricks, paving, and concrete.

Landscape contractors need to be not only skilled at construction, but also competent businessmen; able to evaluate the costs involved in undertaking a project and produce an estimate or quotation. They need to be able to organise sub-contractors and any additional staff to undertake a project.

On large jobs (commercial and public projects), the duration and scope of a project can be immense and a landscape contractor may need to work under direction from a landscape architect or designer, and/or a project manager. On larger projects, the contractor may spend a lot of their time organising materials and equipment, and giving instructions to a large team of employees. Often landscape contractors who head bigger firms will complain that they never get to actually do any physical work, and they spend most of their time behind a desk, in a car or talking to people.

In contrast, a smaller contractor may work alone or in partnership with one other - mostly on small residential projects, engaging sub-contractors or employing additional staff on occasion - as and when the need arises. These smaller contractors need to be able to do anything that is required, from planting to weed control, laying pavers, building retaining walls and fences, creating drainage systems, installing garden furnishings, spreading gravel and operating small machinery.

Other landscape gardeners may specialise in 'soft landscaping'. That is, they work predominantly with soft materials such as soil and plants. These landscapers may work independently or in conjunction with hard landscapers whereby they come up with the planting design to complement the construction work, and they implement it. They may also deal with things like removing or replacing other plants, pruning existing plants, conditioning the soil, installing containers or window boxes, balcony and roof terrace design, and so forth. In much the same way that landscape contractors, or hard landscapers, may sometimes deal with plants and soft materials, soft landscapers may use some hard materials e.g. installing wall fountains or trellis panels, fences, etc. That said, they mainly focus on plants.

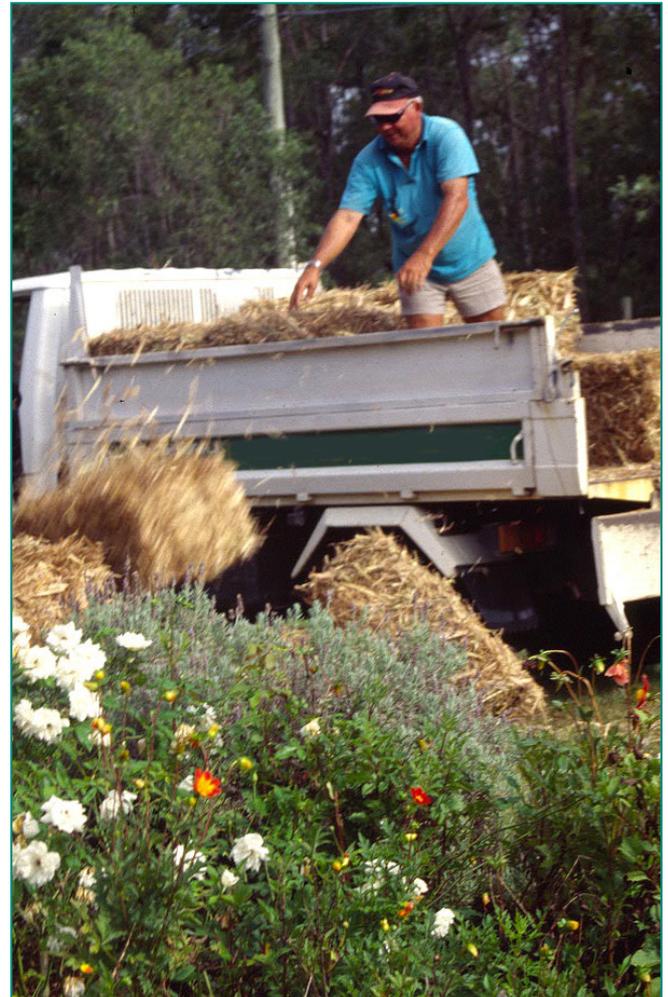
### Where Do They Work?

Most landscape contractors or landscape gardeners work for small businesses with between two and five staff, within one work team that would undertake one job at a time. Medium size landscape firms may tend to only undertake smaller jobs (residential or commercial), but may be undertaking several jobs at a time. Large contract projects (e.g. landscaping for a major shopping complex, new tourist resort or even theme park) would be more likely undertaken by very large contracting firms. Some property developers (e.g. home builders) may employ a landscape team to build the gardens around the display homes or spec homes they build.

Other landscapers are self-employed and may team up with others to undertake larger projects, or to cover work which is not their forte.

Some public authorities may have permanent landscape departments (e.g.

roads department, for landscaping roadsides, traffic islands and median strips. Or municipal parks departments, for landscaping parks, gardens, sports grounds and playgrounds in a municipality).



**Most landscape contractors or landscape gardeners work for small businesses.**

### Opportunities

People in developed countries are employing landscape contractors to construct their gardens, or renovate sections of established gardens - particularly couples who are short on time, but have the disposable income to employ a landscaper.

Opportunities do arise to find employment as a landscaper, but often the work is not permanent, and rates of pay are often minimal. Working for someone else can be an excellent way of getting a start, to build experience and learn practical skills, but more often than not you will eventually need to consider self-employment if you want good remuneration and better job security.

### What Is Needed?

A landscape contractor or tradesman may start their career by doing a course, by working for another contractor, or even through creating their own garden at home i.e. having it noticed by others and securing work based on those recognised skills. A qualification is not necessarily needed (in every case), but knowledge and practical skills are essential, and even if you learn these through experience, it can always be useful to undertake some formal training to “fill in any gaps” that you might not necessarily be aware of until it is too late because of a serious mistake you have made on the job.

Landscape contractors need to be good communicators; listening and understanding people as well as talking and being understood (whether by fellow workers or clients).

To operate a successful landscape contracting business, you need all of the same knowledge and skills that any business operator needs, and a personality that is suited to being a business operator. Some of the most successful landscape contractors may not necessarily be the best horticulturists or landscape tradesmen, but they will be good at business and knowing how to secure the professionals they need to do the job in hand.

## GREENKEEPERS AND TURF MANAGERS

Greenkeepers are primarily concerned with maintaining lawns and sports turf surfaces. This includes everything from lawns in home and public gardens, through to golf courses, bowling greens and other playing fields. They may also need to build and establish new turf areas, and maintain gardens, trees, landscape features or other facilities associated with a turf area.

Work tasks can include mowing, fertilising, spraying for weeds, dealing with pests and diseases, hand weeding, topdressing, repairing damaged areas, irrigation, and using tools or machinery for edging, aerating, raking, vacuuming, renovating or other jobs. Certain types of turf need special preparation before use (e.g. playing fields or running tracks need the grass to be line marked, a turf wicket may need rolling, and covers used to keep water off the playing surface). Irrigation and water management can include hand watering, laying drainage systems, sand slitting during a playing season, using machines to sweep or soak up excess surface water, cleaning and maintaining drainage and irrigation systems.

### Where Do They Work?

Larger facilities such as a major sporting complex or golf course usually employ greenkeepers, assistant gardeners, supervisor, and perhaps a superintendent or turf manager to head up one or several teams of people involved in turf care.

Smaller facilities such as bowling clubs employ fewer staff, sometimes only one greenkeeper or turf manager. These people need to be a “jack of all trades” and do everything from routine turf

maintenance to handyman work on the clubhouse.



**Larger facilities such as a major sporting complex or golf course usually employ greenkeepers.**

Private and commercial gardens often use lawn mowing contractors and specialist turf companies to undertake routine maintenance and renovation or troubleshoot extraordinary problems when they arise.

Greenkeepers and turf experts work at golf courses, horse racing tracks, football grounds and other playing fields, lawn tennis courts, croquet rinks, lawn bowling rinks, turf farms (providing instant turf or sod), lawn seed companies, schools and universities, tourist resorts, turf research stations or anywhere else where a quality turf is required.

### Opportunities

The turf industry is a significant employer within horticulture, particularly in developed countries where large numbers of people play sport. Consider how many golf courses and soccer grounds exist and how much effort is required to develop and maintain the turf at these facilities.

Turf grass that gets used more will be damaged more, and require more manpower to maintain. Premium, high profile facilities that are used for televised sporting competitions are always in need of highly skilled green keepers. The best greenkeepers have the opportunity to eventually work at such facilities, and earn a premium income.

Many will start in a position where they are studying while working and gaining experience. The course they undertake may be a certificate, diploma, or perhaps (only in some countries) an internship or apprenticeship. Sometimes the first job may be as a volunteer at a local sporting club. Often football, tennis or bowling clubs may need to rely on volunteer, unpaid work from members, to look after their turf (at least partially),

and sometimes this voluntary work is enjoyed so much that it can lead to eventual employment opportunities.

### What Is Needed?

Greenkeepers need a broad foundation in horticulture (commonly 600 hours or more of formal training), to understand soils, turf plants, fertilisers, weed and disease control, and water management. The job will also often involve working with the people who use the turf.

Even if a facility is owned by municipal government, you may still need to work closely with players and club committees. Greenkeepers who have empathy, good communication skills, a natural ability to prioritise and organise themselves, will be most likely to satisfy the users, as well as the owners of a facility. This type of greenkeeper is more likely to progress through the ranks to become a technician, supervisor, manager or superintendent.\*

## INTERIOR PLANTSCAPER

Interior plantscapers are indoor plant specialists. They supply and install plants into a building, maintain the health of those plants and replace them when necessary.



**Interior plantscapers are indoor plant specialists.**

The work may involve growing and caring for container plants in a nursery situation (perhaps an at-home base), selecting plants, loading them onto a truck, transporting them to a client's building, moving them inside, maintaining plants inside the building (e.g. watering, fertilising, feeding, controlling pest and disease, removing unsightly foliage or flower, pruning, etc.), maintaining irrigation systems, keeping written records, and removing plants that need rehabilitation or disposal.

Interior plants are commonly grown in containers, from small to large, in a potting soil or media. Some are grown in soil beds (e.g. in an atrium created within a building), others are grown as a "green wall" and sometimes plants are grown in a hydroponic system.



**High profile facilities that are used for televised sporting competitions are always in need of highly skilled green keepers.**

## Where Do They Work?

Interior plantscaping firms operate in larger population centres. Some plant nurseries may operate an indoor plant supply department (hiring or selling) as part of a larger business. Some government departments or other larger enterprises which regularly need interior plantscaping may employ permanent or part time staff to provide their needs.

Interior plantscaping is used for events (e.g. on the stage at a concert, a wedding reception, a conference, a trade show), and as permanent installations in public buildings, offices, retail shopping malls, airports, and other such locations.

## Opportunities

Interior plantscaping can be a relatively obscure industry, but in reality it is a bigger business than most people (even other horticulturists) appreciate. Some interior plantscaping firms employ dozens of staff and operate a fleet of trucks, visiting and attending to clients plants once or twice every week. There are businesses that do nothing but supply large decorative containers for plants, and others that supply the infrastructure (excluding plants) for green walls.

Some businesses may only employ one or two people; but even as an owner operator, a plantscaping business can be quite lucrative if you offer a good service and organise your business well.

## What Is Needed?

Interior plantscapers must above all have very good knowledge of plant species and how different plants are affected by different interior environments. Air conditioners lower humidity. Interiors may often have artificial light but poor natural light. Buildings are often heated artificially

to a constant temperature all year. Plants that are exposed to drafts when doors open and closed, or are exposed to heating or cooling vents, may be affected by rapid and frequent changes in temperature conditions. Plants in buildings are never exposed to wind and rain, as they would be out of doors, and they usually have roots confined within a container. None of these things are natural, and it takes a knowledgeable horticulturist to appreciate how to keep plants looking good in an interior environment.

Some people enter this industry by learning on the job; starting out as an unskilled nursery hand, moving up to being an assistant on a truck and progressing from there. Others take a course of study then build on that knowledge with experience. You will always progress faster if you study first.

If you want to become a manager or business owner, you also need business and management skills.

## OTHER JOBS IN THE AMENITY HORTICULTURE SECTOR INCLUDE:

- Cemetery superintendent/ grounds staff
- College/school grounds person
- Garden furniture company
- Garden ornament supplier
- Landscape supplies
- Garden media presenter (must be very experienced and knowledgeable)
- Horticulture trainer/teacher/lecturer (with further studies in education).

## CHAPTER 5 PRODUCTION HORTICULTURE

Jobs in production horticulture require some kind of specialised knowledge pertaining to the area of production, as well as general horticultural knowledge which can be applied to their area. For instance, someone working in a native plant nursery would require an understanding of the optimal propagation techniques and growing conditions for a range of native plant species, whereas someone working in a vineyard will need to understand how to grow different types of grape vine in order to get the best yield for wine production and how to quickly identify and control pest and disease problems which may threaten a vintage.



**A person working in production horticulture is required to have specialised knowledge in the chosen area of production.**

## MARKET GARDENER

Market gardeners grow vegetables (and sometimes other plants) for market. Crops are often grown by cultivating soil and forming it into long mounded rows (row cropping) and planting seed or seedlings on the raised rows. The lower rows between each mound are used to access the crops. Some crops are planted over a broad acreage (broad-acre crops), without mounds having been formed. Some market gardeners will grow crops in a greenhouse, and some in hydroponic systems (e.g. tomatoes).

Certain market garden crops are more suited to broad-acre growing, where soil preparation may be less involved, and large machinery (often specially designed) can be used to plant, cultivate and harvest crops on a large scale. Techniques and equipment have been developed to grow potatoes, tomatoes, peas and carrots, along with some other market garden crops this way. The people who work in this large scale form of production will need to understand and operate expensive equipment. They may be growing tens or hundreds of acres of the same crop at the same time (often under contract to supply produce to a processor).

Smaller scale market gardeners grow crops that are not needed or suited to growing on a large scale; their work can be less involved with machinery, and more involved with the plants.

A market gardener needs to plant seed and/or plants, fertilise and water the growing plants, inspect the crops progress and respond to any health or other problems that arise (e.g. weeding, pest control, protection from extreme dry, cold, wet, etc.). They need to identify the right time to harvest, then

harvest the plant and treat it properly after harvest (e.g. storing at the right temperature). The job can also involve delivering the plant to market, and perhaps selling it.



**Market gardeners grow vegetables (and sometimes other plants) for sale at markets.**

## Where Do They Work?

Market gardeners who provide vegetables to a processing plant will need to be growing produce in a location where delivery to the processor is easy. This means transport facilities need to be close to the farm, and ideally the farm should be in the same locality or region as the factory.

Market gardeners who supply fresh produce to market will do best if they can grow close to where the end user lives. The cost of land in urban areas usually prohibits the farm being in an urban area (unless it is very intensive and productive farming), but often they will be located on the fringes of urban centres.

Certain products though, may not be able to be grown where they are needed - due to climatic conditions or because the grower wants a greater sense of control over the growing environment. In these cases, a vegetable might be grown in a greenhouse, or to produce an "out of season crop". It may be more expensive to get to the user, but it may attract a much higher selling price.

## Opportunities

Market gardeners often look for seasonal workers to help harvest a crop, or do other jobs at a particular time of year; but might not employ permanent staff. Some larger farms may employ permanent labour, but the level of pay may be minimal. This can provide an opportunity for someone to learn about market gardening though.

Large scale farms, or technologically advanced farming (e.g. hydroponics, aquaponics, greenhouse production, controlled environment mushroom production), can be lucrative business

opportunities. There are market gardeners who have become very wealthy; and for the "smart farmer" opportunities exist, but those opportunities are more likely to be as a self-employed farmer than working for someone else.

In the past, market gardeners grew into the job, because it was their family business. They often learnt on the job from their parents, and sometimes supplemented this by undertaking a horticultural course somewhere. Today family farms on the fringes of cities (market gardens and others) are often sold to developers, and children of farmers move on to different careers. We still need to eat vegetables though; and increasingly, people who have already had a career elsewhere, but have a desire to work with plants, may set up new farms in new areas.

## What Is Needed?

To grow vegetables or other market garden produce you need:

- Broad foundation knowledge of horticulture including soils, nutrition, water management, weed control, pest and disease management, etc.
- Knowledge of the specific requirements for growing the species or cultivars you choose to grow and an ability to choose cultivars that are most productive and that extend the growing season.
- Skills to operate machinery and equipment, and apply safe and productive work practices
- An understanding of harvest and post-harvest handling practices
- If you are to be self-employed you need business and marketing skills.

## ORCHARDIST



**Once established, the work of an orchardist generally follows a standard annual program driven partly by seasons.**

Orchardists grow fruit or nuts (and occasionally other products) on trees. Their work can involve tree planting on a new site or removing and replanting

trees on an old site. Planting is only a small, but important part of the job.

Unlike other horticultural crops, fruit and nut trees can take many years from when they are planted, until when they are productive i.e. producing a viable crop. Many will take 3 to 5 years to become fully productive, and some more than 10 years. Some fruits (e.g. pawpaw and banana) may reach full production within a year or two of planting. The work involved on an orchard can be different while the trees are establishing, to what it is after the plants are established.

Once established, the work of an orchardist generally follows a standard annual program. Fruit (or nuts) will be harvested at a certain time each year, and after harvest there will be periods when the orchardist needs to attend to weed control (e.g. cultivation, mulching or spraying), pruning (more important with some crops than others), fertilising, watering, drainage works and other tasks.

Some fruits will be harvested and sent to market for sale immediately. Sometimes though, the orchardist will harvest and store the produce in a cool store, or under controlled atmosphere, then sold throughout the year as and when it is advantageous to get an optimum price.

There are periods when the workload is less, and other times (usually harvest) when work demands are hectic and hours of work can be very long.

### Where Do They Work?

Most people who work on orchards are the owners, family members, or seasonal (usually unskilled or semi-

skilled) workers. Many orchardists will employ seasonal labour for picking fruit, and some employ casual or part-time labour for other things such as pruning.

## Opportunities

Certain fruits and nuts are more productive and can attract much higher levels of income than others. Mainstream fruits (e.g. oranges and apples) can sometimes be over-produced and when that happens, the income may be poor, but in a season when production is low (e.g. during a drought or after a flood) these mainstream fruits may be in low supply and high demand, and the orchardist can do very well. Some orchardists have reduced risk and improved profitability by value adding to their produce (e.g. making wine, producing preserves, or producing dried fruits). Others have focussed on growing rare and exotic varieties, creating a niche market by supplying a fruit that no one else supplies.

Nuts offer a slightly different opportunity to fruits because they generally keep better. If you harvest a nut crop, you can transport it to a different market without fear of the produce bruising or rotting, and if there is a glut when you harvest a crop, the nuts can be stored for a long time until prices improve, then sold.

Large fruit producers have the opportunity of signing contracts with processing factories or supermarket chains which guarantees their sales; contract growing though, is always a compromise where you accept a lower than optimum price, in order to be certain of a sale at harvest.

Many fruits will have dozens, and some hundreds, of named cultivars. Even within the same type of fruit, the characteristics of the fruit can vary a

lot (e.g. taste, what it can be used for, time of year it is harvested, etc.). If, for example, an orchardist grows all of the same variety of apple, it may only be suitable to selling for cooking, or for juicing, or for eating fresh - but not all three. If the entire orchard is the same apple variety, the apples may all need to be harvested around the same time. If you are harvesting fruit with a mechanical harvester, and selling under contract to a juicing plant, it can be advantageous to be harvesting everything in the same week. However if you are harvesting by hand and selling fruit over an extended period, you would be better growing apples that can be harvested at different times. There are apple varieties that can be harvested mid to late summer, and others that are not harvested till mid autumn.

## What Is Needed?

Orchardists need:

- Broad foundation knowledge of horticulture including: soils, nutrition, water management, weed control, pest and disease management, when a cultivar is likely to ripen, etc.
- Knowledge of the specific requirements for growing fruit and nut cultivars which have been chosen to grow, and an ability to choose cultivars that are most productive - so they can choose suitable cultivars and treat them appropriately.
- Skills to operate machinery and equipment, and apply safe and productive work practices.
- An understanding of harvest and post-harvest handling practices.
- If you are to be self-employed you need business and marketing skills.

## VINEYARD MANAGER OR WORKER

Growers of grapes usually set up their vineyards with one of three main aims in mind:

1. To grow grapes for the table or fresh fruit market
2. To grow grapes for drying (sultanas, raisins, currants)
3. To grow grapes for the wine industry.

With each of these three offshoots there is also the possibility of growing a completely organic, or biodynamic crop, or simply growing your crop with whatever chemicals are necessary for successful production. Usually the organic crops achieve higher prices, particular for the fresh and dried product, but this may vary within regions and countries.

### Where Do They Work?

Working in vineyards involves large amounts of outdoor work in all sorts of weather, and at all times of year, in order to maintain and care for the crop and ensure the continued productivity of the vineyard. If the vineyard is to produce its own wine, then there will also be large amounts of indoor work involved, often in a laboratory testing and blending ingredients, to make a quality wine to release to the market.

Owner-operators of smaller farms have to be an expert across a number of fields.

Vineyards may be just one diversification for a hobby grower. Hobby growers, as well as some of the larger wine growers, often have their

own cellar door and tasting rooms, operate as a tourism venture with regular visitors, tours, and in some cases also operate a restaurant, with or without wedding/conference facilities.



**If the vineyard is to produce its own wine, then there will also be large amounts of indoor work involved.**

### Opportunities

There is a regular need for seasonal workers in vineyards, especially the smaller ones where vines and crops will be picked by hand. In larger vineyards this is usually undertaken mechanically.

There would be opportunities for mechanically-minded and experienced people in larger wineries. For wineries which have a “cellar door” and/or restaurant, regular hospitality, bar service and customer service jobs will be available. University courses are available on oenology or the study of winemaking (which does not include the growing and harvesting of grapes), as well as specialised courses in viticulture (grape growing for the wine industry).

### What Is Needed?

There are a wide range of duties involved in growing, producing and marketing crops from a vineyard. Choosing the right site and soil is vital. Also, choosing varieties for your purpose (wine varieties are often different to table varieties), understanding soils, chemicals, pests and diseases, different methods for training vines, pruning, and harvesting techniques, awareness of machinery operation and maintenance. All these different areas of knowledge are as important as knowing about the maintenance of the vines.

Crops usually need protection from birds and predators with the aid of scare guns, netting systems and suitable fencing. Grapes usually need some supplementary watering and it must be well timed for the best results depending in whether it is a fresh fruit crop or wine crop. Methods and timing for watering crops and knowledge of maintaining irrigation equipment is also a must. Managers and workers have to know how to scientifically judge exactly the right harvesting time and methods to use, as this can make all the difference to the final product.

A knowledge of storage techniques and drying techniques (for dried crops) is

part of the job in some vineyards, and if you are to make your own wine then a good basic knowledge of chemistry is very useful since you will need to balance all the chemicals in a wine barrel. Another option is to have an arrangement with a larger winery whereby the grapes are sent out to be bottled under your own brand label, or the vineyard may elect to simply supply and sell their grapes to wineries where they are blended with other varieties.

In most cases, you need a love of the outdoors and to enjoy working outside for most of your day in all types of weather. A background in farming, living or working on farms, agricultural science or crop growing, will be useful for this field. Mechanical knowledge, knowledge of horticulture and pruning, planting, training and harvesting - along with identification and control of pests and diseases is a good grounding.

If you aim to run a vineyard and manage others, then work in human resources and business management, and owning and operating a small business would be useful. If you are passionate and knowledgeable about wines and wine varieties as a consumer, then this will also be beneficial.

Marketing, advertising, packaging (choosing suitable labels and logos) are all important aspects of the day-to-day running of a vineyard and knowledge of business management will also provide background information for selecting markets and distribution.

To create a tourism venture, knowledge of the local tourism industry, travel, tour guides, food and beverage handling, hospitality, customer service, and formulating business plans are all useful skills.

## NURSERY PERSON – PRODUCTION

A production nursery-person (sometimes called a wholesale nursery-person) produces plants by either propagating them and growing them to a saleable size or buying in small plants and growing them into bigger plants, finally selling them for a profit.

### Where Do They Work?

There are many different types of production nurseries. They vary in size, from properties less than 1 acre to properties covering hundreds of acres.

Some concentrate on producing plants of a particular size (e.g. propagules i.e. seeds and cuttings nursery, or advanced tree nursery), while others are focussed on producing a certain type of plant (e.g. herb nursery, perennial nursery, fruit tree nursery or native plant nursery). Highly specialised nurseries may focus on just one plant family or genus (e.g. African violet nursery, protea nursery or rose nursery). Production nurseries may be in ground, use glasshouses, or use plastic hoop houses or a combination.

### Opportunities

Many nurserymen are small scale operators who employ only family members - or only one or two people outside of the family. Medium and larger production nurseries will employ more people, and are more likely to have a career structure that offers the possibility for advancement (and better remuneration), over time.

Certain skills are critical to different types of nurseries, and people who have proficient skills and can work fast are always going to be in high demand. Nurserymen will highly value staff who can propagate

quickly and still get a very low rate of loss, or employees who can pot-up a lot more plants per hour, without losing any more than someone who pots more slowly.



**Nurseries need to grow plants quickly.**

### What Is Needed?

Different skills are required to work in different nurseries. A propagation nursery is focussed strongly on propagation, so it is critical to understand how to germinate different seeds or how to get cuttings (of a variety of species) to form roots. A propagator needs comprehensive knowledge and hands on skills for propagating lots of different species of plants.

Some production nurseries may focus on 'growing-on' so propagation skills may not be as important, but the ability to grow plants quickly up to a saleable size is important.

All nurseries need strong, healthy plants that are relatively uniform in shape and size, without damaged leaves or any sign of infection. It requires knowledge to achieve this. The owners or managers of a production nursery do need to have sound, broad based foundation knowledge of horticulture, but they do not always need to be an expert propagator or technician. If their job is to manage staff and market the plants, they can employ horticultural experts to attend to the fine detail of day to day plant propagation and care.

## GARDEN CENTRE/RETAIL NURSERY PERSON



**Garden Centre/Retail Nursery people inspect plants, make sure the health and appearance of plants are good and also be a sales person.**

These are people who sell plants to the public. They sometimes propagate and grow some of the plants they sell, but selling is their focus, not production. They may also sell associated products, such as potting media, pots, fertilisers and pest control chemicals; any of which can become “add on sales,” increasing the amount of income that can be generated when they sell a plant to a customer.

Daily work priorities must always be “care for the plants first.” If plants begin to look poorly, dry out, become infected - or worse - die, reputation will slide and the viability of the nursery is threatened.

Staff need to inspect plants, eliminate any signs of dead or diseased tissue, remove weeds, prune off unsightly growth, water plants, or remove plants that are no longer worthy of floor space, ensure paths are not slippery (remove algae), make sure aisles or paths are not obstructed, ensure non-living stock is topped up and presentable on shelves, etc. Beyond this, they need to be observant of any clientele who enter the nursery, and proactive in applying subtle sales techniques to servicing the customers.

### Where Do They Work?

Retail nurseries (garden centres) can be small or large, and can be departments within larger retailers. Large hardware stores often have a garden centre attached, and sometimes a production nursery may also have a retail section.

Garden centres may be located within city centres, or where land is at a premium they may be located in the suburbs or on the fringes of cities depending how much space they need.

## Opportunities

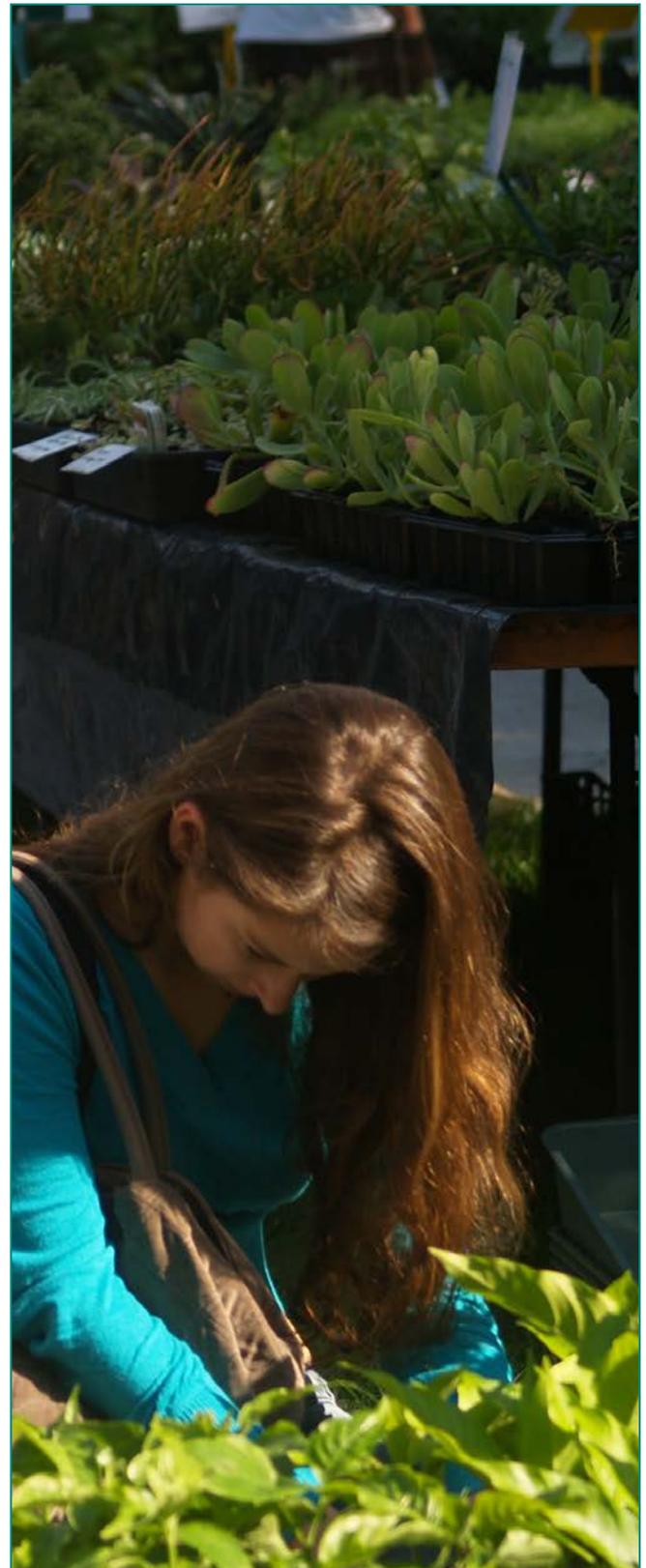
Retail nurseries will traditionally generate most of their income from plant sales. Product knowledge is crucial. If you can talk about the plants you have a greater ability to sell them. Retail nurseries employ staff to maintain and sell the plants they stock.

Garden centres have diversified in recent years so that they now generate income from other means such as: through selling gardening accessories e.g. clothing, footwear, gloves, secateurs, plant containers, statuary; running a cafeteria; or offering specialist services e.g. indoor landscaping, outdoor garden design, or having a floristry shop on site which provides wedding or funeral flower installations.

## What Is Needed?

Garden centre staff need:

- Good plant knowledge. An ability to identify a minimum of 500 different plants and talk about how and where to grow each of those plants.
- Broad foundation knowledge of horticulture including soils, nutrition, water management, weed control, pest and disease management etc.
- Knowledge of all non-living products and services that can be sold through the nursery, and an appreciation of the potential for 'add on sales' (e.g. selling a fertiliser to go with a plant being purchased, or potting media and pot to be used with an indoor plant being purchased).
- Skills to operate machinery and equipment, and apply safe and productive work practices.
- If you are to be self-employed you need business and marketing skills.



**Nursery staff need a good understanding of plants as Nurseries will traditionally generate most of their income from plant sales.**

## CUT FLOWER GROWER

The work of a cut flower grower can vary according to the type of plants they are growing, how they are grown and harvested, and the way they are growing them.

Types of crops include:

- Annual flower crops (e.g. carnations, sunflowers, poppies, stock, statice).
- Bulbs (e.g. tulips, daffodils, gladioli, iris) - can sell both the bulbs and the flowers.
- Woody perennial plants (e.g. roses, proteas, heathers).
- Tropical or greenhouse plants (e.g. orchids, gingers, heliconias).

Ways of growing cut flowers include:

- Row crops in open paddocks.
- Greenhouse crops.
- Hydroponic crops.

In garden settings, gardens created with beds of cut flower producing plants may have a dual purpose (e.g. a large rose garden may attract visitors who pay to enter the garden, buy food at a café, and the flowers may then be harvested and sold as cut flowers through a flower market).

Some rural producers may grow cut flowers along with other things as a cash crop. A market gardener, for instance, who is primarily growing vegetables, may have a hedge of proteas or banksias around their property acting as a windbreak, but also providing a flower crop that can be sold for additional income.



**Cut flowers are always in demand, especially if you can produce something that transports well.**

### Where Do They Work?

The work can be varied according to what is grown, how it is grown and how it is harvested and marketed.

Growing annual flowers or bulbs in open paddocks can be relatively low tech. Routine tasks may include

cultivating paddocks, planting, weeding, watering, spraying pests, harvesting flowers, lifting and dividing bulbs, post-harvest handling (e.g. packing, applying chemicals to lengthen the flowers lifespan), and shipping.

Flowers grown in a greenhouse or in hydroponics can be a relatively high-tech operation, requiring a high level of scientific knowledge and hands on technical skills. Some flower farms use very sophisticated equipment to control light, temperature and humidity conditions in order to manipulate flowering times. Both potted and in ground plants can be grown this way to produce flowers all year round, or at times of the year when they are not normally available. People who work on these more sophisticated farms will still need to get their hands “dirty” at times - but with a high level of automation, they may sometimes feel that their job is more akin to a factory manager than a farmer.

People who work with perennial flowers grown as row crops, as hedges, or in garden beds, will have a different daily routine to those growing annuals. For instance, a big part of rose growing is pruning - something which may be done rarely if at all with some annual flowers. It can take one to several years to establish a planting of woody perennials, before you begin harvesting, but once producing, you do not need to replant every year.

## Opportunities

Cut flowers are always in demand, especially if you can produce something that transports well, has a good shelf life, and is different to what is widely available to florists at the moment. Flowers can command the best price when demand is high and supply is

low. Demand for flowers exists all year round, for weddings, funerals and other occasions - but an extra demand occurs at certain times (e.g. St Valentine’s day).

In many places around the world, certain flowers are seasonal; many cut flower growers have built a successful business based upon providing flowers outside of the normal season. Other growers have achieved success by finding and introducing a type of flower that is not readily available in a market.

Some flowers are always in high demand and low supply. Everyone tends to love orchids, roses and lavender, for instance, so these are always highly saleable - but the farmer does need to be careful to not oversupply the market,

## What Is Needed?

A cut flower grower needs all of the skills and knowledge that any general horticulturist has - but also an ability to grow a healthy, unblemished flower that is durable after harvest. They need to know how to harvest it correctly and how to package and treat the harvested product.

Some growers will sell their produce direct at the farm gate and to retailers (perhaps through a wholesale market stall, or off a truck), while others may sell through an agent.

A more sophisticated greenhouse or hydroponic flower farm will normally be a much greater initial investment, but can be highly productive in the produce it yields per acre per year. The cut flower farmer here needs to be a very good business manager and employ highly skilled technical staff, if the farm is to return an appropriate profit for the investment made.

## FLORIST

Working as a florist can be a very satisfying job for those who are passionate about flowers, and who enjoy customer service and working with clients.

For the retailer, much of the reward comes in hearing about the huge smiles on clients' faces when they receive a beautiful arrangement delivered to their door, or seeing their happiness when they are presented with an arrangement or bunch of flowers inside the shop.

Florists usually start work early in the morning either going to the market to collect flowers for the day/week or preparing flowers that have already been delivered to their door in the early hours. Flowers need to be conditioned and prepared to ensure they remain in top condition for as long as possible. Some heavy lifting is involved with large bunches, sorting blooms and lifting buckets full of water. If the florist also sells pot plants these will need checking and watering too, to keep them in good condition.

A number of arrangements are usually made up before the store opens and this may be quite early in the day. The florist may still be at work in the store after many workers have arrived home at night. The shop needs to be well laid out and kept pristine and fresh in order to create an inviting environment and top buying experience for the customer. Flowers should be regularly monitored and any wilting or injured plants should be removed from display.

### Where Do They Work?

There are a range of roles as a florist. You may be working in a retail florist store in a local shopping centre. Alternatively,

you may be operating out of a store in a large shopping complex, which can be a large shop selling gift items and cosmetics as well as floral arrangements, or it may be a store selling largely already completed bouquets and gift boxes brought in from a florist wholesaler.



**Working as a florist can be a very satisfying job for those who are passionate about flowers.**

Other florists specialise in corporate work and catering for large functions, conferences and weddings, and these florists are usually located in large towns and centres - often operating from a shop which also caters for the day-to-day needs of customers. These florists will usually employ a driver, or courier service, to do deliveries, or one of the members of staff will take on this role.

For those not interested in retail work and customer service there are also opportunities working with wholesalers in large warehouses who spend their day making up bouquets and arrangements to sell at the smaller stores or to cater for online ordering. Some cut flower growers also have a florist to tie bunches and

do some arranging and packaging of bouquets before they leave the farm.

Online ordering is responsible for a large number of sales in floristry these days. Customers view pictures and prices of items, order over the internet and the bouquet arrives at its destination usually that same day, or at a pre-determined time.

Some florists may teach the art of flower arranging, either privately from home, or through larger floristry companies which offer these services.

## Opportunities

Casual positions as a florist come up regularly on job sites, often at peak times for florists when extra hands are needed. These busy times include Easter, Christmas, Mother's Day, and St. Valentine's Day. Looking for work at these times is a good opportunity to get a start in the industry.

There are also possibilities for part time work, full time work, and management positions. As a floristry manager, you may be in charge of a whole shop as well as overseeing one or more florists who work in the back of the shop. You will be responsible for taking orders and making up arrangements or instructing the other florists to make them up. A manager might also supervise a factory floor of florists who are making up arrangements.

With the diversity in retail there are also positions available in some nurseries, garden centres, large gift shops and larger department stores for an 'in house' florist. Some top 'designer' florists in major cities can become local celebrities.

A few florists grow part of their own material to provide flowers and foliage for

the store, though the flowers would have to be of exceedingly good quality. Some florists start this way, as keen gardeners with a big garden making up small bouquets, and then later opening a shop. Some florist shops also diversify to cater for the lean times by selling bunches of mixed fresh herbs in posies, potpourri, soaps, chocolates, liquor, or other items which could be matched with flowers..

## What Is Needed?

Experience working in a florist shop or with flowers is a top basic requirement. A passion for working with people, work experience in retail/business and customer service gives a good grounding. Knowledge of plants, cut flowers and how they grow, and being able to identify a wide array of different flowers and foliage used in floral arrangements will go a long way to winning over customers. An eye for detail and creative design would be a great asset.

A driver's licence and the ability to work flexible and, at times, long hours is also beneficial for those wishing to be involved in decorating functions. For instance, a typical wedding will involve decorating the church or other wedding venue e.g. the entrance, the ends of the pews, as well as making the bouquet for the bride, buttonhole flowers, and bridesmaids' posies, and also the reception e.g. table arrangements, cake decoration. Much of this can be done the day before if kept cool, but other parts will have to be done on the day.

Florists may train on the job, but many have undertaken studies in floristry beforehand to give themselves a head start. Some may study certificates or diplomas in floristry but many will study more general horticulture courses with modules specialising in floristry, or they may just focus on specific floristry modules.

## HERB GROWER

There are different avenues to take if you want to become a herb grower, largely based around what you choose to grow and for whom. You may choose to become a specialty herb grower, and sell directly from your nursery either as a wholesale or retail operator. If you choose to operate as a retail seller, as well as selling directly from your nursery you might also sell through local nurseries, farmers markets and fairs, or possibly through online sales (within quarantine regulations).



**There are different types of herb growers, including specialists in scented, medicinal or culinary herbs just to name a few.**

A herb grower who chooses a wholesale market may grow small plants to sell on to others who will then plant them out in the ground as a crop for later harvest of the roots, stems, flowers, leaves or seeds.

Other herb growers may be more interested in growing herbs to collect the seed and then supply it to wholesale

markets, other nurseries, retailers, health food markets, or natural remedy suppliers.

Herbs, such as crocus (for saffron), curry plant, oregano, lavender are grown to produce the dried product for resale. These herb crops are usually grown out in the open ground in specially prepared growing fields.

Some growers produce herbs for the fresh vegetables trade such as basil, oregano, rosemary, thyme, coriander, dill. There are three main choices of how you produce these crops. They are grown in the open fields, grown in greenhouses where they are given optimum growing conditions and the growing and production season can be extended, or alternatively, they may be grown hydroponically in shade houses, or greenhouses, where all the growing levels can be controlled including feed, spraying, light levels, and temperature. Growing herbs as an aquaponics operation may be another viable enterprise.

Micro-greens is a popular current trend which involves producing herbs, and sometimes vegetable and flower mini-seedlings (hydroponically), to use as a fresh crop or garnish. It can be used straight from a punnet or trimmed and harvested two or three times before the plants are renewed.

Some herb growers specialise in only scented herbs. They grow roses, lavenders, lemon verbena, mints, and similar herbs for drying and use in potpourris or for herbal teas.

### Where Do They Work?

Herb growers work mostly outdoors, often for long periods. They sell fresh and dried products, young plants and

seedlings, and produce seed for retail and wholesale customers. Indoor work may include negotiating sales, drying or packaging produce for market, and storing produce in refrigerators or drying shelves. Employment will be at a herb farm or nursery and may be a small family run operation or a large scale enterprise.

## Opportunities

Herb growers are familiar with the growing principles of their crop, from the seed-raising stage right through to harvest. The type of knowledge needed will vary depending on whether it is intended to be a seedling plant for resale, fresh cut leaf crop, fresh cut flower crop, dried flower, leaf, or root product, or a seed crop. Herb growers need to be able to supply the right growing medium or soil and to manipulate fertilisers and nutrients. They should also know how to provide adequate water and sunshine, and deal with pest and disease protection for the crop. They also need to be aware of how to harvest the crop appropriately and hygienically, to meet government food preparation standards.

Other roles in the operation are packaging the crop, storing it correctly, marketing and distributing it according to consumer demand and government food handling regulations.

The optimum goal to be an established and successful producer in this area, where the crop is often very short-lived and fast-growing, as well as seasonal, is to produce a consistent, quality crop that buyers can rely on, all year round.

There is huge potential in this area of herb growing as the demand for edible food, essential oils, gourmet products, and organic fresh produce escalates in most countries of the

world. Choosing a location close to large local potential markets, customer bases and restaurants, is preferable for success since products can be supplied regularly, whilst still fresh, and with minimum travel expenses.

## What Is Needed?

You need a sound knowledge of horticulture, and obviously herb growing in particular, to be a successful herb grower. If you choose to grow the plants and sell them you need a sound knowledge of nursery operations, commercial enterprises, the retail market, and possibly also knowledge of business and marketing techniques, as well as online advertising.

A background in farming or other crop growing and the principles of organic growing would also be useful. An ability to research, observe, be aware of, and analyse trends will also be the key to success.

Since you are growing specific crops, you need to be able to quickly identify and treat any pest and disease problems, identify physiological disorders, nutrient deficiencies or toxicities, eradicate weeds, and understand the soil, water, fertiliser, light, and other crop requirements.

To grow hydroponically you would need a sound knowledge of hydroponic systems and production, and/or micro greens if this is the direction you choose. You would also need knowledge of the crops you intend growing, preferably knowledge from the seed stage to full flower and seed production, as well as your crop's nutrient needs and its common pests and diseases. Knowledge of mechanics, chemistry, and irrigation would also be useful for hydroponics and aquaponics.

## PLANT BREEDER

A plant breeder produces new cultivars of plants that have a valuable commercial potential, and they licence production nurserymen to grow and sell those plants. Schemes (e.g. Plant Variety Rights) operate in some countries, which allow plant breeders to register ownership of a plant they bred, whilst other countries simply do not operate such schemes.



**A plant breeder needs an intimate understanding of plant botany, genetics, plant propagation skills and above all, great plant knowledge.**

Plant breeders create new types of plants by:

- Choosing male and female parent plants that have desirable characteristics
- Taking pollen from the male flower and transferring it to fertilise the female flower
- Protecting the female flower from being contaminated by stray pollen from other plants
- Nurturing the female plant to develop seed
- Collecting seed at precisely the optimum time
- Propagating new plants from the seed they collect
- Growing the seedling plants until they can determine which of many propagated, displays the most desirable characteristics.

### Where Do They Work?

Plant breeders may work in specialised laboratories operated by large commercial companies, research institutions, or universities. They may also work for nurseries or botanic gardens, or specialised government departments.

### Opportunities

In some developed countries, plant breeders can earn as much or more profit on plant sales than profits earned by production nurserymen or retailers. Plant breeding can be a risky business, though, if you do not have an adequate level of plant knowledge - as well as horticultural skills. It can also involve an element of luck. You need to produce

a cultivar that is unlike anything else available (or differs significantly), and has the potential to sell at a high price and in large numbers. Then it needs to be promoted well and have an organised and effective distribution system - so that it is available to all who want it.

Some types of plants can be bred, grown on, selected, and propagated in very large numbers and then launched to the public all within less than two or three years. However, for other types of plants - breeding, developing and launching a new cultivar can take five, ten, or even more years.

### What Is Needed?

A plant breeder needs an intimate understanding of plant botany, genetics, plant propagation skills and above all, great plant knowledge. Plant breeders are plant specialists who can readily see the subtle differences between different genera, species and varieties of plants. They need to have a heightened awareness of their industry, the plants that are already available, the characteristics which are most favoured in plants and the things that the industry desires and cannot readily find in existing cultivars. They need to set trends and recognise changing trends set by others.

Some plant breeders are self-taught enthusiasts who have worked for so long with a genus they are passionate about that they know more about it than anyone else i.e. other horticulturists, scientists or nurserymen. Others have studied science in depth, they have learnt about plant breeding, genetics and propagation as a foundation, and then studied particular plant types that they are keen to breed.

## AGRONOMIST

Agronomy is the growing of broad-acre crops. These crops may be vegetables such as peas or beans, oil crops (e.g. sunflower, mint), seed (e.g. lawn grass, pasture grass), grains (wheat or other cereals), or fibre crops (e.g. cotton, hemp).

Agronomic farmers grow these crops usually on large acreages and use machinery for cultivation, weed and pest control, and harvesting the crop. Sometimes, high value agronomic crops may be grown on smaller acreages.

### Where Do They Work?

To be successful as an agronomist, you do need to be prepared to go where the work is; and that is generally in rural areas.

### Opportunities

You should be prepared to relocate or change jobs if the industry changes. For example, during periods of prolonged drought in Australia agronomic employment dipped in that country, but opportunities increased in other countries. After the drought, opportunities grew rapidly again in Australia.

### What Is Needed?

Agronomists are employed both on and off farms; and include people with relatively little formal training who work in semi-skilled or manual labour jobs, through to highly skilled university trained professionals.

Agronomy is a huge part of global agriculture, and the sheer size of this industry means that many people are

employed not only to actually farm these crops, but also to develop and supply the seed, fertilisers, machinery and chemicals needed to produce the crops.



**Agronomic farmers grow crops usually on large acreages and use machinery for cultivation.**

## HYDROPONIC FARMER OR SUPPLIER

Hydroponics involves growing plants without soil. The roots are held in a moist environment either anchored in an inert material (e.g. washed gravel, perlite, Rockwool™) or enclosed in a pipe or container that contains some water and a high level of moisture in the air. Because there are no nutrients in the root zone, it will be clean (free of disease), and nutrients can be added in a very controlled way. Hydroponics is a technologically advanced way of growing plants. It offers you an opportunity to control things such as the nutrients, the pH (acidity), water and air levels and disease; more than what would ever be possible with soil.

### Where Do They Work?

Hydroponic growers often work from large-scale commercial hydroponic farms which are typically housed in industrial scale greenhouse environments, or they may be smaller scale ventures perhaps only specialising in one or two crops. Some hydroponic growers have set up their own ventures and may be self-employed with little or no outside labour. In some instances hydroponics may be set up outdoors or under screens or shade cloths.

### Opportunities

Hydroponics is a significant and rapidly growing sector of horticulture. Certain commercial crops are grown extensively in hydroponics in some parts of the world. An increasing number of people work on hydroponic farms.

Hydroponics is also very popular amongst home gardeners around the world. Hydroponic shops exist in most population centres, particularly

through the developed world, offering employment selling hydroponic equipment and materials.

Other jobs in this industry include hydroponic consultants and teachers.

## What Is Needed?

A thorough understanding of hydroponic growing systems is a must. This includes knowledge of different types of growing, grow bed materials and design, how to mix nutrient solutions, and reservoir tanks.

Awareness of optimal growing conditions and nutrient solutions for specific crops is also required.

A grower will also need to understand different growing techniques such as succession planting (growing plants together at different stages of maturity), and control of pests and diseases.

It is also necessary to know how make daily monitoring checks using equipment to keep abreast of changes in the alkalinity level (pH) of the nutrient solution, electro-conductivity (EC), and strength of solutions to ensure that crops are not exposed to toxicities or deficiencies of nutrients.

People working in this industry will need to have a good general understanding of plant physiology and requirements which may be gained through studying a general horticulture qualification. On top of this some specialised knowledge is required which may be gained from studying individual modules in hydroponics or specialised certificate or higher level courses.

Those working on the retail side will need to have some knowledge of

how to set up systems and repair and maintenance. They will also need to demonstrate how to use specialised equipment.



**A thorough understanding of hydroponic growing systems is a must.**

## OTHER JOBS IN THE PRODUCTION HORTICULTURE SECTOR INCLUDE:

- Herb Farmer
- Flower, vegetable or seed producer
- Native seed harvester
- Revegetation material grower
- Mushroom Farmer
- Viticulturist
- Plant geneticist

## CHAPTER 6 OTHER HORTICULTURAL JOBS

These include jobs which do not fit comfortably into the domains of production or amenity horticulture. Many of these jobs may involve some elements of work in either or both of the aforementioned industries whereas others are quite different.



**There are many other jobs available for horticulturists that do not fit comfortably into the domains of production or amenity horticulture. One of these is Horticultural Tour Guide, someone who takes groups around significant gardens etc.**

## GARDEN WRITER, BROADCASTER, MEDIA WORK



**Often media personalities that work in presenting gardening material are known more by name and for their writing, than for broadcasting.**

These are the communication jobs in this industry. Maintaining relationships with advertisers, employers and patrons is critical to the continuation and

success of this role and doing this takes time. Some people who are already established entertainers or work in media, for example journalists, decide to take on garden communication.

Often media personalities that work in presenting gardening material are known more by name and for their writing, than for broadcasting. Magazine and newspaper articles, as well as blogs and books are constantly being produced by an army of garden writers and photographers. These people, like the broadcasters, need to maintain relationships with colleagues and benefactors, and remain up to date with the latest ideas and products in the industry.

A garden writer will spend a lot of time alone, behind a computer, typing in words - but will also need to spend time meeting and talking with people, sometimes face to face, sometimes through emails, social media or on the phone. They need to be both reclusive (when writing), and sociable (when interacting with others). The same applies to illustrators, who write or draw to produce horticultural illustrations, and also garden photographers. They need to visit horticultural sites to take photos or do drawings, and interact with other people, but a significant amount of their time may still be spent alone (behind a desk), cataloguing images, perhaps processing them through programs like Adobe Photoshop, In Design and dealing with clients and agents to sell their work.

### Where Do They Work?

Many garden writers and broadcasters are largely self-employed. They may work under contract to a publisher, TV station, radio station or some other media body; but contracts typically

do not last forever and generally only offer part-time employment for a limited time and can stop instantly for some change in fashion or fickleness of media groups. Beyond the contract, the rest of their work may be freelance work. This might involve writing occasional articles, making guest appearances, or being the figure that launches a program or product.

Larger broadcasters and publishers may employ horticulturists on staff in a full time capacity, perhaps as a writer/editor or a publication or show.

## Opportunities

Most garden writers and broadcasters don't come to that position intentionally, only a few do. People who communicate well, and have an interesting story to tell will tend to get noticed, and often get asked to write something for a publication, or make a guest appearance on a show. When the written article or guest appearance is successful, they will be in a prime position to be asked to do "more of the same". It is rare that jobs like "garden writer" or "TV presenter" get advertised. It is far more common for people to be offered work at first, and once they have established a reputation, to get ongoing work by networking and negotiating opportunities with colleagues involved in horticultural media.

## What Is Needed?

There are a number of things you need to be successful in this area of work including good communication skills, the ability to write well, broad and up to date knowledge of horticulture, sound industry experience, an affable personality, and finally strong networking skills.

## ALLIED TRADER

Allied trades are the businesses that support the horticulture industry, supplying it with chemicals, tools, machinery, construction materials, soils, fertilisers, garden products, plant labels and anything else. Allied traders are involved in both creating and marketing a very wide range of products. Allied trade companies include some of the largest and most significant companies in the industry.

## Where Do They Work?

Some allied traders develop, manufacture and market their products to trade-users or retailers. Others licence the rights within a particular country or region, to manufacture products from a parent company or individual who owns the international rights, and others import or buy products from a manufacturer and operate as a distributor.

## Opportunities

Often product developers come to horticulture via other industries, for example:

- An engineer or mechanic who creates a new tool or machine
- A chemist or chemical engineer who creates a new fertiliser, pesticide or other chemical product useful to horticulture
- An entrepreneur who sees a need in a horticultural setting and develops a solution.

Many medium and large horticultural companies will employ or sub-contract appropriate people to develop new products. Large chemical, tool and

machinery companies are constantly developing new products, and improving on old products. Potting media companies are always testing and modifying the range of potting media they offer for sale.

Opportunities always exist to develop a distribution network within a local or regional market that is not adequately serviced.

Establishing an allied trader business may not be difficult if you choose your product range well (only offer things that are in demand) and you manage the business properly. Any new business requires a significant investment in stock, so these are not businesses that are usually started up without some serious financial backing.

The 'Achilles heel' for any allied trader is always going to be poor sales - so anyone who has effective sales skills will always have opportunities to find employment in sales or marketing with an allied trader.

Larger allied traders employ staff in everything from PR and marketing to administration, stock control, despatch and product development. Opportunities exist in all parts of the allied trade industries - but the remuneration and opportunities for promotion can vary.

## What Is Needed?

The most important thing you need is to know the products you are selling, their strengths and weaknesses, how they are made, maintained, and used. Some allied traders may be professionals or tradespeople from another industry, bringing skills that are needed in the horticulture industry (e.g. chemists, engineers, mechanics, plumbers etc.).

Others may start out as a horticulturist, farmer or gardener, who sees a need or opportunity, and develops a product as a result.

Allied traders are sometimes, but not always, skilled horticulturists. It always helps to have strong foundation knowledge of horticulture, because the people who you deal with will be gardeners, farmers or horticulturists. If you know the client or customer better, you can deal with them better.

If you want to be an allied trader, you may enter this occupation by using skills you already have as leverage. If you are a tradesman in something else think about where those skills might be useful in horticulture. If you have experience in sales or marketing, you might look for work selling or marketing horticultural products.



**Allied trades are the businesses that support the horticulture industry, supplying it with chemicals, tools, etc.**

## HORTICULTURAL RESEARCH SCIENTIST

Horticultural research scientists conduct research into many different aspects of horticulture from growing techniques to specific pests or diseases through to new cultivars. A researcher will usually have a particular area of interest or expertise.



**Broad-based research skills and scientific knowledge are important.**

### Where Do They Work?

Research scientists are employed by government and private research facilities including commercial allied trade companies and universities. Commercial companies employ research scientists to develop and test new products. Potting media companies often use a soil scientist to develop new and better potting media. They conduct scientific tests on their new products, and extract research data that can be used for both customer services and marketing. The scientist may need to write technical data sheets and promotional material, and give lectures or presentations to colleagues and clients from time to time. Similarly, a fertiliser business, pesticide business, or other allied trader may also employ and use scientists in this way.

Scientists who work for public funded research stations have in the past been able to be less “commercially compromised” in their work, however in today’s world even governments and universities need to be pragmatic about the research which they do and do not fund.

### Opportunities

Research scientists who have the best careers are well networked, and prepared to move to whatever project is offered, wherever it might be in the world. If you want to live in the same suburb and study the same specialisation all of your life - you may not have a future as a researcher.

### What Is Needed?

For long-term career security as a horticultural research scientist, you need to have a high level of expertise in what you are researching - but also the capacity to move to research in very different areas of horticulture if the funding dries up in your specialist area.

Broad-based research skills and scientific knowledge are important, as is broad plant knowledge (the ability to identify over 1000 different plants for example). You will also need to understand different types of research techniques and how to undertake scientific research using control groups to assess the impact of an independent variable.

Research scientists may start out by studying horticulture subjects at college or through distance education, and then build up to studying a degree at university. Many will go on to undertake masters degrees and doctorates as they progress through their career.

## HORTICULTURAL CONSULTANTS

Horticultural consultants are people who sell advice. There are many different types of horticultural consultants.

### Where Do They Work?

Some provide broad-based advice – they will go to any garden, farm or horticultural enterprise and advise on different matters such as how to better grow the plants, how to solve a problem that is facing the property, or diagnose a particular pest or disease and discuss treatment options.

Some provide advice within just one sector of the horticulture industry – they may focus on plant nurseries, home gardens, hydroponic farms, or something else.

### Opportunities

While some consultants may work in a small team with other experts, more often than not they will be sole operators who need to be good communicators, capable of effective time and financial management, and able to market themselves effectively.

Consultants can earn a relatively high hourly rate - but in order to achieve a high income and constant cash flow they need to obtain sufficient, consistent work from clients. Some consultants achieve this by building a group of regular clients who arrange routine visits, while others simply build an exceptional reputation where they have a long waiting list of clients.

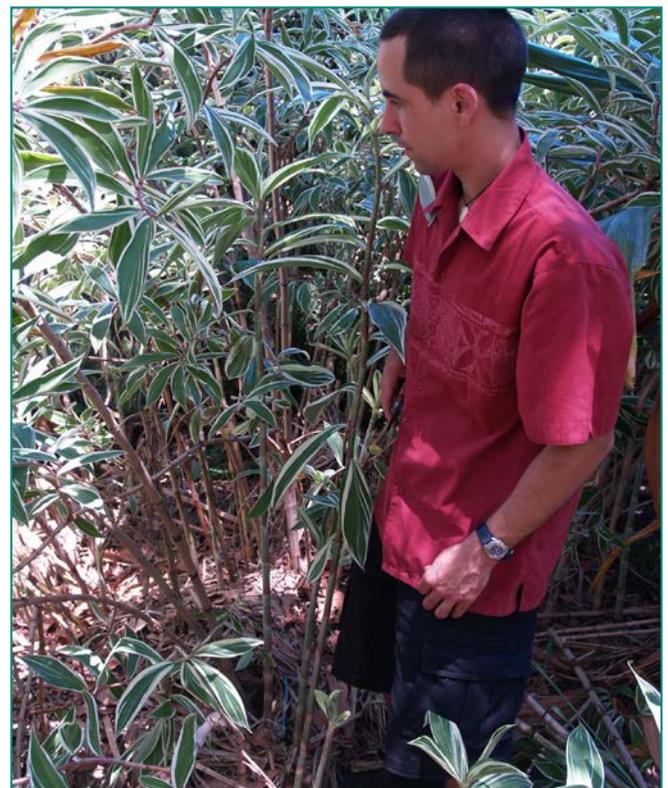
### What Is Needed?

Consultants need a broad foundation in horticultural knowledge which is usually

gained by studying to a diploma or degree level (3 years of full-time study), combined with several years of hands-on experience.

Most consultants would work in industry for 10 years or more after their initial studies before becoming consultants. They build their expertise, and develop a strong network of contacts which can be invaluable later on, both for getting work, and for solving problems.

While technical expertise is an important requirement for any consultant, the most successful consultant is sometimes a person who is a better communicator and less of an expert, than more of an expert and a poor communicator.



**Some Horticultural consultants provide broad-based advice – they will go to any garden.**

## HORTICULTURAL TOUR GUIDE OR OPERATOR

Some horticulturists find employment as tour guides, where they can impart their knowledge of horticulture, the history of gardening, and its evolution to interested parties.



**Tour companies will organise international visits to garden shows and historic gardens nationally and internationally.**

### Where Do They Work?

Tour companies will organise international visits to garden shows and historic gardens nationally and internationally; employing a horticulturist to travel with the group. Though you may be employed primarily to talk about gardening, tour guides may also be responsible for liaising with accommodation and travel suppliers, organising meals and keeping the group on schedule.

### Opportunities

Some properties generate a large proportion of their income from charging entry to a garden, and/or hiring gardens for special events. For instance, gardens are sometimes hired out for private photo shoots, for weddings, fashion shoots, etc. Additional income may be generated from selling plants or light refreshments in a café attached to the garden.

Work in this area has increased in recent decades as more historic properties have come into public ownership in developed countries.

### What Is Needed?

To be a successful guide you first and foremost have to be a good communicator and enjoy working with people. A pleasant disposition and a genuine interest in what you are talking about will also engage your audience.

A sound knowledge of horticultural techniques and practices, garden history, and a specific knowledge of the elements of the tour are also required.

Depending on your location, knowledge of other languages would also be useful when dealing with tourists from overseas.

# HORTICULTURAL THERAPIST

Horticultural therapy is also often called 'gardening therapy' or 'garden therapy'. As with other forms of therapy, horticultural therapy is concerned with the physical, psychological and emotional well-being of its participants. Providing structured horticultural activities can not only help to focus the mind of a client, but can also offer valuable time to de-stress for carers.

Horticultural therapists use horticultural activities as a tool for helping disadvantaged people in a number of different ways including:

- Improving or maintaining muscle function, and other aspects of physical wellbeing
- Psychological wellbeing (e.g. helping elderly people stay active in their declining years, helping disabled people to have a sense of worth, providing an opportunity for social interaction, etc.)
- Providing people with impaired capabilities an opportunity for employment (e.g. in a sheltered workshop)
- Providing a pathway to rehabilitation; or perhaps providing an alternative lifestyle
- Developing practical skills
- Developing social skills
- Rehabilitation of physically or psychologically damaged individuals
- Delaying the progression of Alzheimer's disease and other forms of dementia by keeping the mind active.



**Horticultural therapy is concerned with the physical, psychological and emotional well-being of its participants.**

## Where Do They Work?

They can work in medical or health care institutions (e.g. hospitals, homes for the elderly), community centres, special schools (e.g. for disabled or handicapped people), sheltered workshop, prisons, or any other relevant situation.

Some of these places of work are explained further as follows:

- Sheltered workshops – working with people who have intellectual or physical disabilities. Tasks might involve things like growing plants, perhaps in a plant nursery, producing fruit and vegetables, undertaking some sort of garden maintenance task, or something else which is horticulture-related. The sheltered workshop provides an opportunity for these people to be productive, and often to earn some level of income, in a sheltered situation.
- Rehabilitation centres or hospitals – conducting gardening activities that can contribute either mentally or physically to the rehabilitation of people following an illness or accident.
- Elderly care services – organising facilities and gardening activities in a retirement village or elderly care facility.
- Home visits - therapists may visit the homes of those with debilitating diseases or those undergoing rehabilitation.

## Opportunities

Opportunities arise for this type of work periodically in any place where you find disadvantaged people, including drug abuse victims, accident victims, disabled and handicapped people, the elderly, people with dementia, people suffering debilitating illnesses, etc.

Sometimes programmes are developed with a group focus, and at other times they are tailored for the needs of an individual. The therapist may work with a small group, or they may work one-on-one with individuals. They often work

closely with health care professionals or other service providers. For instance, a physiotherapist may better understand the physical needs and limitations of an accident victim. A horticultural therapist working with a physiotherapist can develop a programme of horticultural activities for an individual that is tailored to their needs and leads to effective rehabilitation. A horticultural therapist who is assisting a dementia sufferer might work in conjunction with an occupational therapist and a psychologist. The benefit of this combined approach may be that the patient can be prescribed a pathway to recovery that does not seem like exercise, and which the patient is more motivated to adhere to.

## What Is Needed?

A horticultural therapist needs to be part horticulturist, part health care worker, part counsellor, and sometimes other things beyond these.

A good grounding in practical horticulture is necessary i.e. knowing how to plant different types of plants, how to fertilise, water, prune, etc. You should also be able to plan out logical sequences of events for clients to undertake and provide easy to understand instructions. Personal strengths for this type of work include being able to remain calm under pressure, and to have patience and perseverance. You also need to be a good communicator and be empathic.

Sometimes people move into this area of work having worked in other areas of horticulture. They would like to be able to use their knowledge and experience to help others. Others may come from the caring professions but decide to do some study in horticulture to enable them to move into this area.

# HORTICULTURAL EDUCATIONIST

Some teaching jobs are mostly teaching, but others are not. The role of a classroom based teacher is not always obvious, so make sure you are clear about what the job involves before taking on a job – for example in some situations a teacher can find themselves doing more assessment and paperwork, and less teaching than was expected.

Students are increasingly studying by distance education, or undertaking “blended learning” which can be a combination of home study, workplace learning and classroom learning. Educators involved in this type of provision may or may not be spending a lot of time in direct communication with students.

## Where Do They Work?

Colleges, schools and universities employ people in a variety of roles to provide educational services to students.

People with relevant industry or teaching experience may teach privately, from home or as a guest lecturer at universities, botanic gardens, trades conferences, etc.

Others may work for private institutions or education providers, and offshoots of the education industry such as distance learning, or course writing.

## Opportunities

The nature and scope of horticultural education has changed dramatically over recent years. If you aim to move into this sector of the industry, you do need to be prepared to adapt to change.



**The role of a classroom based teacher is not always obvious, so make sure you are clear about what the job involves before taking on a job.**

Opportunities abound in both sectors, public and private, and in a wide range of positions. There will always be a need for people to improve their knowledge and gain qualifications.

### What Is Needed?

People wishing to become a teacher of horticulture would generally take a teaching degree and specialise in horticulture. However, there are other options as follows:

Teachers will usually have a minimum qualification of a diploma. These days employers often seek a degree from younger employees. The qualification may be in horticulture or a related area of study. In other cases, a degree in another area of study plus work experience in the horticulture industry may be acceptable.



**Horticultural Teachers will usually have a minimum qualification of a diploma.**

To teach in classrooms someone with a qualification in horticulture, or another area of study, would also need a post-graduate teaching qualification.

A good teacher will be able to convey information to students in such a way that the student is easily able to understand what is being expressed. They need to know their subject well and be able to explain things in different ways.

### OTHER JOBS THAT MIGHT OVERLAP HORTICULTURAL PRODUCTION AND AMENITY SECTORS COULD INCLUDE:

- Horticultural sales and marketing staff
- Garden club proprietor (e.g. Digger's Mail Order Garden Club)
- Gardening book or video distributor
- Pesticide and herbicide spraying contractor
- Taxonomist, plant collector, plant label supplier
- Soil scientist, potting media supplier
- Fertiliser manufacturer
- Garden tool manufacturer
- Horticultural machinery
- Glasshouse/greenhouse manufacturer, pot, container manufacturer
- Paving material and specific garden accessory producer

# APPENDIX

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## DISTANCE LEARNING AND ONLINE COURSES

The authors of this book have developed a large variety of distance learning courses, online, on CD or by correspondence, which are available through various colleges that are part of the ACS Global Partners Network. See <https://www.acs.edu.au/courses/Default.aspx>

These courses include:

- Landscape Construction
- Landscaping I – Introduction to Design
- Landscaping II
- Landscaping III – Landscaping Styles
- Plant Selection and Establishment
- Water Gardening
- Cottage Garden Design
- Garden History
- Garden Styles
- Natural Garden Design
- Playground Design
- Planning Layout and Construction of Ornamental Gardens
- Restoring Established Ornamental Gardens

These include short courses and qualifications at various levels. Most shorter courses take about 2 hours per week for 12 months to complete.

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## SELF DESIGNED COURSES

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## VIDEOS

The author of this book has also produced and presented a range of gardening videos, including: “Australian Native Plants”, “Identifying Plants”, “Designing a Garden”, “Identifying Herbs” and “Plant Propagation”. These are available by mail order, or on loan through some libraries.

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## E BOOKS BY JOHN MASON AND ACS STAFF INCLUDE:

Starting a Business	Growing Tropical Plants 2nd edition
Project Management	The Environment of Play 2nd edition
Business Operations	Garden Design Part I
Psychology Dictionary	Garden Design Part II
Counselling Handbook	Tropical Landscaping
How Children Think	Starting a Garden or Landscape Business 2nd edition
Farm Management 2nd edition	Starting a Nursery or Herb Farm 2nd edition
Profitable Farming 2nd edition	Aerobic Fitness 2nd edition
Working in Horticulture	Aquafitness 2nd edition
Commercial Hydroponics 3rd edition	Nutritional Therapy
Trees and Shrubs for Warm Places	Human Nutrition
Organic Gardening	Animal Health
Climbing Plants	Horse Care
Growing Conifers 2nd edition	Dogs – Caring for Dogs
Roses	Marine Animals
Herbs	Professional Writing
Trees and Shrubs	English Grammar
What to Plant Where	
Fruit, Vegetables and Herbs	

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## PRINTED BOOKS BY JOHN MASON

John Mason has been writing books since the 1970's and has over 40 titles published, some as printed books, others as e books. Some (print) titles are out of print, and now only available as second hand books or e books. If you have difficulty finding any of Mr Mason's titles, you can enquire by email to [admin@acs.edu.au](mailto:admin@acs.edu.au)

### **Print Books by John Mason include:**

Fun and Fitness Trails, Victorian Dept. of Sport and Recreation, 1978  
Starting a Nursery or Herb Farm, Night Owl, 1983 (revised 1994)  
The Environment of Play, Leisure Press, New York, 1982  
Herb Review, self published, 1987  
Landscaping with Herbs, self published, 1988  
The Native Plant Expert, self published, 1989  
Let's Grow Gardens, self published, 1990  
Growing Ferns, Kangaroo Press, 1990  
Commercial Hydroponics, Kangaroo Press, 1990, 2007  
Growing Vegetables, Kangaroo Press, 1991  
Growing Herbs, Kangaroo Press, 1993  
Nursery Management, Kangaroo Press, April 1994  
Tropical Gardening, Bay Books, October 1994  
Yates Guide to Pests & Diseases, Angus & Robertson, February 1995  
Growing Pelargoniums & Geraniums Hyland House 1996  
Farm Management Kangaroo Press 1996  
Growing Australian Natives Kangaroo Press 1997  
Starting a Nursery or Herb Farm (Revised ed) Kangaroo Press 1997  
Sustainable Farming Simon & Schuster (Kangaroo Press) Spring 1997  
Growing Tropical Plants Simon & Schuster (Kangaroo Press) 1997  
Starting a Landscape or Garden Business Kangaroo Press 1998  
Aqua Fitness Kangaroo Press 1999  
Growing Conifers Kangaroo Press 1999  
Profitable Farming Kangaroo Press 1999  
A Beginners Guide to Orchids Hyland House  
Aerobic Fitness Kangaroo Press  
Trees & Shrubs for Small Places Kangaroo/Simon & Schuster 2000  
Propagating from Cuttings Kangaroo/Simon & Schuster 2002  
Growing and Using Vegetables and Herbs Kangaroo/Simon & Schuster 2007

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