



Getting Work in Horticulture

A GUIDE TO CAREERS IN HORTICULTURE

by John Mason

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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).

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).

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.