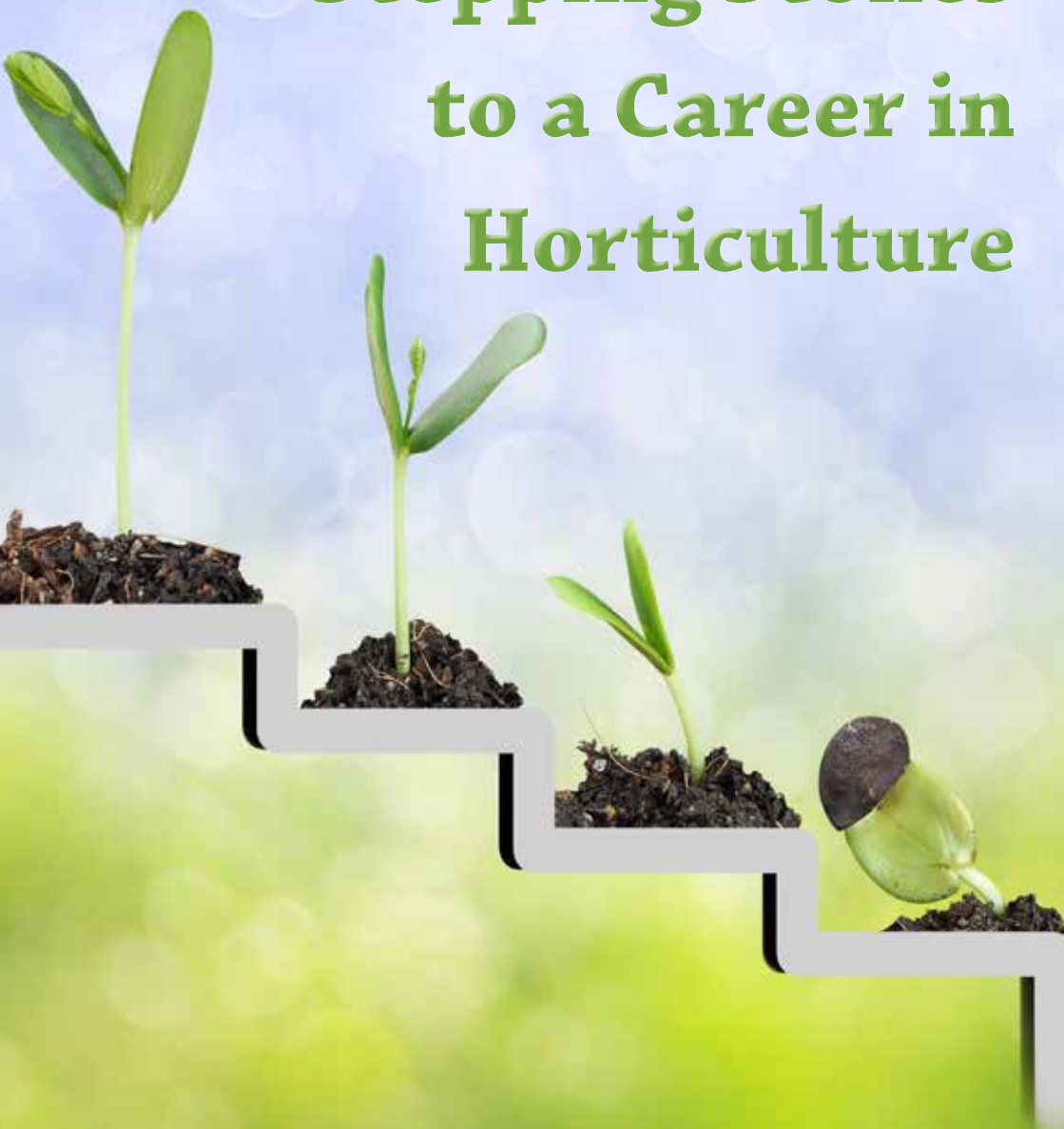


Stepping Stones to a Career in Horticulture





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Foreword

Teagasc views formal horticultural education and training as a priority requirement for a successful, competitive and sustainable Irish horticultural sector. Irish horticultural food and amenity produce output has an annual farm gate value of approximately €350m and provides over 6,000 jobs. There are an estimated further 10,000 jobs in the highly valuable horticultural amenity services sector. The key food and amenity crops grown in the sector include mushrooms, potatoes, field vegetables, fruit, nursery stock, cut foliage, Christmas trees and bulbs.

The *Food Wise 2025* report sets out the national vision for all areas of the Irish agri-food sector including horticulture. It emphasises the need for sustainability, growth, competitiveness, market development and innovation in all sectors. *Food Wise 2025* identifies education and training and up-skilling as core requirements if industries such as horticulture are to grasp opportunities and manage challenges successfully.

The horticultural sector needs to identify the key job and management skillsets necessary to ensure a vibrant horticultural sector for the future. There is also a need to develop structured education and career pathways to make horticulture an attractive choice for school leavers and graduates. Equally there is a need to retain and further up-skill those already working in horticulture.

Teagasc's two horticultural colleges, the College of Amenity

Horticulture at the National Botanic Gardens, Dublin and Kildalton College, Piltown, Co. Kilkenny play a major role in horticultural education and training in Ireland. Both Teagasc colleges work closely with the horticultural sector to ensure that future Teagasc graduates are equipped to meet the changing knowledge and skillset needs of the sector. Teagasc horticultural education and the Teagasc Horticultural Development Department will also offer a broader suite of customised short courses and continuous professional development opportunities to meet the needs of those already working in the sector.

We hope that this guide will stimulate further discussion on career structures and future education needs for a successful Irish horticultural industry.

A handwritten signature in black ink that reads "Tony Pettit". The signature is written in a cursive, slightly slanted style.

Tony Pettit
Head of Education,
Teagasc



Industry Overview

The Irish horticultural industry is an important economic sector in Ireland, the sector encompasses vegetables, fruits, ornamentals, flower bulbs, trees and mushrooms and protected crops. Within these product groups, long-lasting experience in research and development support a modern, progressive and dynamic sector in meeting the challenges ahead and capitalising on the opportunities of the future. This has culminated in a sector output valued at €350m farm gate.

Teagasc Horticulture Development Department has a remit for research, advisory and education to the commercial horticulture sector. We work directly with all the sectors to advance their research agendas and meet the development needs as outlined in *Food Wise 2025*.

Horticulture is a labour intensive sector. In recent decades, there has been a consolidation in grower numbers across the sectors. For example, seventy mushroom producers employ around 3000 people. The increased size of individual operations has led to careers in management, logistics and quality assurance. The data below shows that nearly all sectors are in a growth phase currently and the opportunities for development rest with increased technology adoption and innovation. Generally, horticulture producers face the challenge of the market place on a daily basis; there are no subsidies, so profit from productivity is paramount. In the face of increasing globalisation and competition, increasing consumer

demands around sustainability and quality assured products, growers and producers are constantly trying to harness innovation to maintain competitiveness.

A growing horticulture sector can now provide a range of attractive career opportunities that can also potentially lead to business ownership. With the wide range of options available in Teagasc Horticultural Colleges, people with established careers outside of horticulture who wish to switch can easily access the sector. This guide provides useful information on how to do just that.



Dermot Callaghan

***Head of Horticulture Development Department,
Teagasc***



A wooden sign with a black chalkboard surface is positioned in a garden. The sign is mounted on a light-colored wooden post. The background is a lush garden with various flowers, including pink chrysanthemums in the foreground and a variety of colorful flowers (yellow, purple, red) in the background. A dark wooden fence is visible behind the garden.

Introduction



Introduction

Horticulture is a diverse and rapidly changing industry.

It relates to the science, technology, art and business of cultivating and using plants to improve human life. This booklet will focus on just four key areas of horticulture; sports turf, ornamental plant production, food crop production and landscape design, construction and maintenance. There are however a wide variety of other career prospects in horticulture that generally begin with a horticulture qualification and further specialisation. Graduates have developed small enterprises such as specialised nurseries, niche food crop production or cut foliage production while others have set up their own landscaping businesses.

Key drivers for future horticulture development and expansion include; food security, urbanisation across Ireland and the world, increasing disposable income in recovering markets, decreasing home size resulting in more interest in outdoor spaces, the importance of sports activities and greater uptake of professional services such as landscaping and garden maintenance.

The horticulture industry will not be able to meet and sustain major expansion unless it can attract new, well trained and highly motivated people into the sector at all levels, while also providing significant opportunities for

progression from one career role to another within the industry. This growth can only be achieved with a supply of well-trained horticulturists (including both business owners and managers) with the relevant skills and experience needed to cope with the many newer challenges facing the industry in the future.

Opportunities exist for new entrants into an expanding horticulture industry. New entrants in horticulture may find niches where land ownership is not a prerequisite, managing contract grown crops, or working as landscapers. Those with a family business or farm may be considering diversification or succession and it is important to plan this carefully to develop essential skills.

Surveys of graduates in late 2015 revealed very good employment rates and showed that graduates who had spent longer in education achieved employment more quickly following graduation. Satisfaction levels were extremely high in both Kildalton College and The College of Amenity Horticulture.

Who is this guide for?

This guide will be of use to anyone thinking of starting a career in horticulture or those already working in the industry. It will also be useful to those considering the various training options in horticulture. For those already working in the industry the guide sets out progression routes and areas where further training should help with progression to the next career level.

Is horticulture for me?

Whether you want to work in a laboratory, an arboretum or a golf course, those with green fingers can find a suitable outlet in horticulture; you don't need to be a land owner to get started. Training allows you to become prepared for challenges you will come across during your career as a horticulturist. Horticultural students can be confident that they are not “pigeon holed” into one career, as the training received by students in Teagasc colleges is sufficient in breadth and depth to allow graduates to move between sectors.

As the horticulture industry is very diverse there are suitable careers to meet a wide variety of interests, skills and backgrounds. Previous graduates have moved into a wide range of careers, from landscape design, grounds-keeping to nurseries and



garden centres to name but a few. Many have gone into business for themselves, such as landscapers or nursery owners and enjoy the challenges and flexibility it brings. The resources required to start up can be as little as a car and a few hand tools; however to get into some of the other sectors years of reinvestment will be required. The Department of Agriculture, Food and the Marine administers grants which allow for up to 50% matched funding for horticulture equipment and facilities for trained horticulturalists. Seasonality is a factor that affects all areas of horticulture; most businesses address this by diversifying their product range or using protective structures and others by having seasonal opportunities for casual work.

Our students experience a vast amount of training outside the classroom and gain experience by learning techniques employed by the horticultural industry both in college and on host units through their Practical Learning Periods. Students benefit from the specialist knowledge and experience of Teagasc technicians and lecturers. Level 5, 6 and 7 students focus, not only on the important practical side of horticulture, but also on the more theoretical and management side of the business and are taught by a variety of means including lectures and field work.

If you are active, creative, hands-on and are interested in the environment, landscaping or food production, horticulture may be for you.

Testimonials from horticulturists

I never expected to learn so much. I doubted my capabilities. At the National Botanic Gardens you learn your strengths and weaknesses and how to find your place in the horticultural industry. I'm forever grateful to the entire faculty for their time invested in me. I'm proud to say it's paying off.

James Kelly, Level 6, Year 2014

During my time at Kildalton College, studying Level 6 Horticulture, I found the course challenging at times but enjoyable. The tutors at Kildalton are very knowledgeable and forthcoming with their advice. The subjects that we covered gave me a good grounding in horticultural practices. Following on from completing this Level 6 course I hope to specialise in arboriculture and maybe even undertake further study.

Declan Buggy, Level 6, Advanced Cert in Horticulture, Kildalton College, 2016

Returning to college in my 30s to follow my passion for horticulture proved that it is never too late to change your career. The mix of lectures, practical workshops, site visits and job placements ensured that I was ready for the industry after graduating.

Jack Kelly Rogers, Level 5, 2012, Level 7 BSc in Horticulture WIT 2014

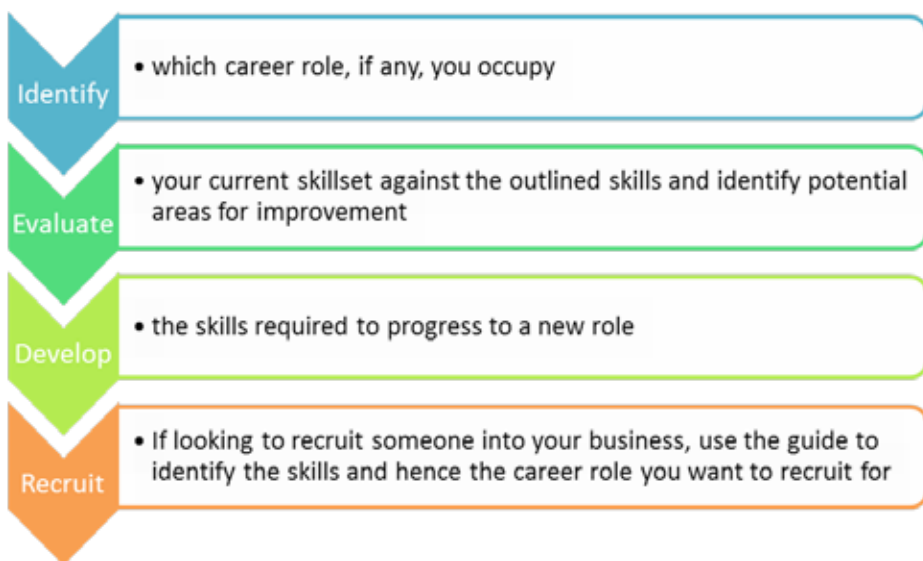
I decided to return to education, choosing the field of horticulture. After completing Level 5, a valuable foundation, I continued on to do Level 6, Landscape Design at Kildalton College. This course has broadened my understanding and enjoyment of the subject, and has opened up the many career possibilities available. I hope to continue learning and to work in the horticultural arena.

Ruth McPartland, Level 6, Advanced Cert in Horticulture 2016



How to use this guide

This guide has been developed to provide more information about the different roles in 4 areas of horticulture. It explains the skills to be developed and outlines the education and training necessary to progress to the next career level.



It is assumed that you have mastered the skills associated with a role before progressing to the next stage. Equally, someone may decide to stay in one particular role for the duration of their career.

As an individual progresses further up the career path and masters additional skills, he/she should be appropriately rewarded in terms of wage or salary or by other means. Those who become self-employed, work on a home enterprise, lease land, glasshouses or polytunnels will hope to establish a profitable business that will grow with their input.

A wooden sign with a black chalkboard surface is positioned in a garden. The sign is mounted on a wooden stake and features the text "Practical Learning" written in white, cursive script. The background is a lush garden with various colorful flowers, including pink and purple blooms, and green foliage. A wooden fence is visible in the distance.

Practical
Learning



Practical Learning

Influence of placement on your success

As part of their studies, students on all of our horticulture courses must undertake a professional learning period (PLP). This PLP takes between four weeks and sixteen weeks to complete depending on the course. Teagasc has an excellent relationship with a variety of registered hosts in Ireland. These placements are professional and standards are assessed to ensure safety and good learning outcomes for the students completing their PLPs there.

Developing your profile to get the job you want

Students undertake PLPs to improve their career opportunities and their personal development. *“When opportunity comes your way it is often recommended that you take the experience that will build your knowledge rather than the one that pays the best”* Peter Donegan, Landscaper and Kildalton College graduate.

Foreign placement, Ohio programme, Erasmus, Bursaries

Horticulture is an internationally important industry and students build skills that travel well – all horticulturists speak the common language of scientific plant names. We have well-developed programmes and experiences to help students find suitable PLPs abroad. Graduates who have travelled for their PLPs typically report that going away was a “door opener” for them and gave them great life experiences and further work opportunities.

The Ohio International Program (www.ohioprogram.org) allows students to undertake their PLPs as interns for a duration of four to twelve months. Our students have been participating in the Ohio International Program for a number of years and have found it to be very rewarding. The program manager Michael O'Keefe oversees internships and helps to arrange hosts for our students. Areas our students have worked in include nurseries, golf courses, arboretums, vegetable production units and tillage farms. Students from the Level 6 Advanced Certificate as well as 2nd year degree students are able to take part. Students must be aged between 19 and 28. The program has a great web site which includes a "Students' experiences" section.

Students of Waterford Institute of Technology can take part in the Erasmus programme which began in 1987. It has become one of the best known EU initiatives in the field of education, and a flagship of European integration. Erasmus gives students the opportunity to study for a period of three to twelve months at a university or higher education establishment in another participating country.

Scholarships and bursaries are available for study abroad from many organisations. Numerous prestigious bodies offer funding either for travel for study purposes or to work in key areas. Students from both colleges have won bursaries from the following in the last 5 years: Royal Horticultural Society, Alpine Garden Society, International Plant Propagators' Society and International Dendrology Society. The website (www.grantsforhorticulturists.org.uk) lists some grants available to British and Irish students.

Internships

Teagasc, in association with the horticultural industry, has developed a range of internships whereby students are linked with one horticulture business for the duration of their education. They will work with the business outside of the academic calendar gaining practical experience within the industry. The students are paid for their work and will build industry experience that will benefit their learning and careers.



A wooden sign with a black chalkboard surface is positioned in a garden. The sign is mounted on a wooden stake and features the text "Horticulture Role Description & Profiles" written in white cursive. The background is a lush garden with various flowers, including pink chrysanthemums in the foreground and a variety of colorful blooms in the background. A dark wooden fence is visible behind the garden.

Horticulture Role
Description &
Profiles



Horticulture Role Description & Profiles

Ornamental Plant Production

This sector is estimated to be worth in excess of €50 million per annum. It is spread across all counties in Ireland, however the greatest concentration of nursery businesses are found in Kildare and Tipperary. The ornamental plant sector is very diverse and includes producers of young plants (plugs and liners), bedding, pot plants, herbaceous plants, shrubs and trees. Many nurseries have become very specialised in what they produce e.g. ferns or bamboo, while others are increasing the range of product and offer a “cash and carry” service. Field production of semi mature trees makes up the biggest area of production. Modern nurseries use a mix of glasshouses and polytunnels to produce crops with high levels of automation to reduce handling and minimise costs. Indoor production incorporates integrated pest management in the production cycle, favouring modifying the environment and the use of biological control over pesticides. A half hectare nursery is roughly sufficient for one person to work year round where labour is hired in at peak times.

Outlets for the sector include garden centres, hardware stores and direct sales to landscapers. Internet sales are in their infancy but are increasing all the time. Exports are predominantly to the UK but other markets are slowly developing.

Job Title	Nursery Assistant	Nursery Assistant Manager	Nursery Manager	Nursery Owner
Formal Education	Leaving cert/ Level 5 Certificate in Horticulture	Level 6 Advanced Certificate in Horticulture - Nursery Stock Production	Level 7/8 Bachelor of Science Horticulture	Level 7/8 Bachelor of Science Horticulture
Desirable Experience	None or limited	2 years	3-4 years	5 year +
Essential Skills	<ul style="list-style-type: none"> ☞ Daily nursery tasks ☞ Plant care ☞ Potting/planting ☞ Propagating ☞ Preparing plants for dispatch ☞ Health & safety compliance 	<ul style="list-style-type: none"> ☞ Manage potting/planting ☞ Plant husbandry ☞ Plant health inspections ☞ Stock Management ☞ Assemble orders ☞ Use label/stock control software ☞ Work organisation ☞ Task supervision 	<ul style="list-style-type: none"> ☞ Nursery management ☞ Business admin ☞ Performance analysis ☞ Nursery software apps ☞ Pest & disease control ☞ IPM ☞ Staff supervision ☞ Communication ☞ Time management ☞ Health & Safety 	<ul style="list-style-type: none"> ☞ Nursery management ☞ Business admin ☞ HR, accounting & strategic planning ☞ SWOT analysis ☞ Health & Safety
Suggested informal education	<ul style="list-style-type: none"> ☞ Attend hort open days ☞ GLAS ☞ Irish Specialist Nurseries ☞ Association Fairs ☞ Read trade publications 	<ul style="list-style-type: none"> ☞ Attend seminars & conferences e.g. IPPS, Teagasc, ☞ Participate in specialist growers' groups 	<ul style="list-style-type: none"> ☞ Attend national and international technical and trade events ☞ IPM Essen Start your own business training 	<ul style="list-style-type: none"> ☞ Business management training ☞ Personal development
Suggested skills training for career progression	<ul style="list-style-type: none"> ☞ Grafting and budding ☞ Nursery machinery use ☞ Pest & disease identification 	<ul style="list-style-type: none"> ☞ IT ☞ Pesticide application ☞ Crop nutrition 	<ul style="list-style-type: none"> ☞ Marketing ☞ Strategic planning ☞ Staff management 	<ul style="list-style-type: none"> ☞ Accounting ☞ Team development ☞ Leadership

Nursery Assistant



Name: John McNamara
Current position: Glenbrook Nursery
Scarrif, Co. Clare

Education

- ☞ Level 5 Certificate in Horticulture
- ☞ Level 6 Advanced Certificate in Horticulture

Background

I started working on the nursery as a summer job after I left school; I really enjoyed the work and was kept on at the end of the summer. After 2 years working in the nursery I went to college in 2012 to get my level 5 and 6 (2013) certificates in horticulture. I've been working in the nursery since I finished in college. I would like to complete a degree in horticulture at some point.

Overview and current role

A typical day varies depending on the season. At the moment we spend Mondays weeding and potting, Tuesday, Wednesday and Thursday are spent getting orders ready for dispatch, Friday I might be spraying and tidying up. In the spring we would spend a lot more time potting on new stock and fleecing plants to protect from frost while they are establishing.

The main challenges are making sure everything runs smoothly. The weather can have a big impact on demand, and on the care of our plants so we have to be flexible in what we are doing day-to-day.

The most important parts of training in college were in Leadership which taught me good communication skills as they are key for my job. I deal with customers on a daily basis; I'm responsible for seven employees of different nationalities so I need to be able to explain clearly what needs to be done.

Recommendations

If I was to give advice to students going on PLP it would be to try to get a range of experiences; try big and small scale nurseries to get a chance to pick up a range of skills and see different crops being grown. Also there are lots of areas in horticulture to try so not to worry if one doesn't suit you.

Nursery Owner

Name: Deirdre Howlin
Address: Kilmore, Co. Wexford
Current position: Owner of Grange
Greens Plant Centre



Education

I completed the Level 5 Certificate in Horticulture (2004) & Level 6 Advanced Certificate in Horticulture at Kildalton College (2005). I then transferred to the 2nd year of the Level 7 Horticulture course in the Waterford Institute of Technology & Kildalton College and completed my degree in 2007.

Career path

I gained experience in fruit & vegetable production, sportsturf and plant propagation while working at Kildalton College. I also did my PLP in Ballykelly Garden Centre, Co. Wexford during my Level 6 in Horticulture.

Background

I grew up surrounded by horticulture as my father owned a garden centre in Co. Monaghan. I went back to college as a mature student.

Overview and current role

A typical day depends on the season but generally involves production of bedding plants, potting on of herbaceous plants and shrubs, watering of plants and the retail side of nursery work. My advice to students is to talk to people in the industry and get as much practical experience as possible. Also it is important to keep up with current trends in horticulture. I feel it is important to produce top quality plants, to be versatile and have a number of sources of revenue.

Nursery Production Assistant

Name: Hazel Tierney

Address: O'Connors Nurseries,
Gorey, Co. Wexford

Current position: Production Assistant

Business details: Wholesale nursery over one and a half hectares of glasshouses specialising in pot plants, bedding plants, hanging baskets and window boxes. Supplies garden centres and large supermarket chains.



Education

∞ Level 5 Certificate in Horticulture

∞ BSc Horticulture Waterford Institute of Technology 2014

Teagasc Kildalton College, Piltown Kilkenny: 16 weeks managing soft fruit trials.

Background

I worked for twelve years in the service industry and two years working in a garden centre.

Overview and current role

My main tasks involve planting and filling orders for dispatch to our buyers.

Future career goals

I plan to focus more on the growing end of the horticulture business.

Recommendations

Choose PLP that reflects your interests. This course was a way forward for me and gave me the opportunity to change my career to something I enjoy doing. There was a good balance between theory and practical work with lots of time spent outdoors. The staff were very supportive and the location of Kildalton College is stunning with great facilities.



Sportsturf

In Ireland, nearly 1 million people take part in sports that are played on natural turf with approximately three quarters of a million people playing ball sports on pitches and one quarter of a million playing golf. Most sports turf facilities involve large capital expenditure for construction and a high level of maintenance is required due to the high expectations from owners and stakeholders. There are approximately 400 golf courses in Ireland and this sector alone employs between 2,000 and 2,500 people. Career opportunities exist at all levels of golf course management subject to appropriate academic and practical training and of course experience. As part of their overall education and training, many turfgrass students spend some time overseas honing their turfgrass knowledge and skills and building a good curriculum vitae. Career opportunities also exist in the other sports that are played on natural turf. These include field sports, equestrian sports, bowling, cricket and tennis. In recent years, significant investment has been made to develop high performance facilities that can be used all year round and a high level of management technology is required. Again there are good career prospects in these new sports facilities across the country and intending employees should do everything possible to acquire the sound and appropriate academic and practical training required to meet the needs of this high tech business.

Job Title	Trainee Greenkeeper	Greenkeeper	Assistant Superintendent	Course Superintendent/ Facility Manager
Formal Education	Leaving cert/ Level 4 Certificate in Greenkeeping	Level 5 Certificate in Horticulture/Level 6 Advanced Certificate in Horticulture (Sportsturf)	Level 7/8 Bachelor of Science Horticulture or Agronomy	Level 7/8 Bachelor of Science Horticulture or Agronomy
Desirable Experience	None or limited	2 years +	3-4 years +	5 years +
Essential Skills	<ul style="list-style-type: none"> ☞ Operate basic turf equipment ☞ Setup of golf course or other sportsturf facility ☞ Health & safety compliance 	<ul style="list-style-type: none"> ☞ Operate all turf equipment. Apply pesticides and nutrition products. Work organisation. ☞ Task supervision 	<ul style="list-style-type: none"> ☞ Facility and task management activities ☞ Performance analysis ☞ Plan pest & disease control & IPM ☞ Staff supervision ☞ Communication ☞ Time management ☞ Health & Safety management 	<ul style="list-style-type: none"> ☞ All sportsturf facility management activities including: <ul style="list-style-type: none"> - business administration - HR - Accounting - Strategic planning - Plan pest & disease control and IMP ☞ Budgeting ☞ SWOT Analysis ☞ Health & Safety Management
Suggested informal education	<ul style="list-style-type: none"> ☞ Attend hort open days ☞ GLAS ☞ Irish Specialist Nurseries ☞ Association Fairs ☞ Read trade publications 	<ul style="list-style-type: none"> ☞ Attend seminars & conferences e.g. IPPS, Teagasc, ☞ Participate in specialist growers' groups 	<ul style="list-style-type: none"> ☞ Attend national and international technical and trade events ☞ IPM Essen Start your own business training 	<ul style="list-style-type: none"> ☞ Business management training ☞ Personal development ☞ Communications ☞ Financial Control
Suggested skills training for career progression	<ul style="list-style-type: none"> ☞ Machinery operation ☞ Rules of golf ☞ Pest & disease identification 	<ul style="list-style-type: none"> ☞ Pesticide application ☞ Crop nutrition ☞ IPM 	<ul style="list-style-type: none"> ☞ Strategic planning ☞ Staff management ☞ Team Development ☞ Agronomy ☞ Mechanics ☞ Electronics 	<ul style="list-style-type: none"> ☞ HR Management ☞ Budgeting ☞ Accounting ☞ Team Development ☞ Leadership ☞ Strategic Planning ☞ Agronomy

Turfgrass Research Assistant



Name: Siobhan Cusack
Address: Ohio Turfgrass
Foundation,
Columbus, Ohio
Current position: Turfgrass Research
Assistant

Education

- ∞ Level 5 traditional stonework
- ∞ Level 5 Certificate in Horticulture
- ∞ Level 6 Grounds maintenance and green keeping
- ∞ Level 7 BSc Horticulture WIT
- ∞ Level 8 BSc Honours Degree Land Management WIT

Background

I worked in a factory for 10 years as well as doing garden maintenance part-time followed by working as a stonemason for a number of years. I worked on a golf course for two years before going to America as part of my PLP as an intern in Turfgrass Management. I volunteered for 3 PGA tournaments while in the USA.

Employment

I am responsible for the day to day running of a research facility with four other employees. The facility is used by the inter-departmental OSU Turfgrass Science Team, including the Department of Horticulture & Crop Science, Department of Entomology, Department of Plant Pathology and the School of Natural Resources.

Greenkeeper

Name: Ruairi Coyle
Address: Galway
Current position: Galway Golf Club,



Education

∞ Level 6 Advanced Certificate in Horticulture

Background

I began my studies at the National Botanic Gardens in October 2014. I wanted to gain more knowledge about greenkeeping and horticulture, I learned a lot about plant identification and plant science. My main interest was greenkeeping and sports turf management. This course was the perfect opportunity to start my dream career.

Employment

In March 2015 I began an internship at Shinnecock Hills Golf Club in Southampton Long Island. I was trained on all aspects of golf course maintenance and equipment operation. As part of the Internship I volunteered at the 2015 US Amateur Golf championships in Chicago held at the Olympia Fields Country Club. The second part of my Internship was in South Carolina on Hilton Head Island. I was part of the maintenance team on Heron Point Golf Course. In April 2016 I volunteered at Harbour Town Golf Links. This was great experience and I really enjoyed working with the maintenance team and watching the tournament.

Recommendations

I believe my decision to go to the National Botanic Gardens was the best decision I could have made. I had a great experience in America and I learned a lot about what it takes to be a greenkeeper. My best advice is to work hard in college and also work as hard as possible during your PLP and ask as many questions as you can. It is only one year and it will set you up for the rest of your life.



Food Crop Production

Field, protected crop and mushroom production have seen increases in efficiency with significant scaling up in production. This has created opportunities for niche crops to develop - organic produce amongst them - supplying the increasing demand from farmers markets, restaurants and convenience food outlets with high levels of traceability. In larger producers there are opportunities for staff to become highly skilled in specific areas from IT and precision farming to quality assurance and marketing.

There are no market subsidises for horticultural produce. This means Irish produce must compete with imports. Global market forces have an increasing impact on Irish producers, highlighting our need to focus on quality produce and take advantage of the wholesome image of Ireland.

Against this backdrop, farm and nursery size will increase on many fruit and vegetable farms over the coming years, requiring an increased level of skill in the physical and financial management capability of horticulturists. There are opportunities also for producer organisations to build stronger trading relationships with large customers such as supermarkets.

Job Title	Charge Hand	Production Manager	Enterprise Manager	Enterprise Owner
Formal Education	Leaving cert/ Level 5 Certificate in Horticulture	Level 6 Advanced Certificate in Market Gardening	Level 7/8 Bachelor of Science Horticulture	Level 7/8 Bachelor of Science Horticulture
Desirable Experience	None or limited	2 years +	3-4 years +	5 years +
Essential Skills	<ul style="list-style-type: none"> ☞ Daily plant care tasks ☞ Sowing seed, transplanting plugs ☞ Raising plants from seed ☞ Harvesting ☞ Health & safety 	<ul style="list-style-type: none"> ☞ Ploughing ☞ Manage sowing and transplanting crops, Plant health inspections ☞ Crop husbandry ☞ Packing fruit & veg ☞ Quality assurance ☞ Assemble orders ☞ Use label/stock/control software ☞ Work organisation ☞ Task supervision ☞ Health & safety 	<ul style="list-style-type: none"> ☞ Farm management activities ☞ Business administration ☞ Performance analysis ☞ Farm software applications ☞ Plan pest & disease control, IPM ☞ Staff supervision ☞ Communication ☞ Quality assurance compliance ☞ Time management ☞ Health and safety management 	<ul style="list-style-type: none"> ☞ Farm management activities ☞ Business administration ☞ HR, accounting & SWOT analysis ☞ Health and safety management ☞ Leadership ☞ Risk management
Suggested informal education	<ul style="list-style-type: none"> ☞ Attend hort open days ☞ GLAS ☞ Read trade publications 	<ul style="list-style-type: none"> ☞ Attend seminars & conferences e.g. Teagasc, ☞ Read trade publications ☞ Participate in specialist growers groups 	<ul style="list-style-type: none"> ☞ National and international technical and trade events, ☞ Read trade publications ☞ Start your own business training 	<ul style="list-style-type: none"> ☞ Read trade & business publications ☞ Business management training ☞ Personal development
Suggested skills training for career progression	<ul style="list-style-type: none"> Tractor driving Forklift training machinery use Pest & Disease identification 	<ul style="list-style-type: none"> ☞ Pesticide application ☞ Crop nutrition ☞ Quality Assurance 	<ul style="list-style-type: none"> Marketing Quality assurance Strategic planning Staff management Financial management Production protocols Staff management & motivation 	<ul style="list-style-type: none"> Accounting Team development Leadership

Vegetable Farmer

Name: Shane Thorne
Address: Rush, Co. Dublin
Current position: Assistant Vegetable Farm Manager
Business details: 200 - 250 hectares of potatoes, parsnip & early season swedes
20-25 employees
Supplying two large supermarket chains



Education

- ∞ 2 years Engineering
- ∞ Level 5 Certificate in Horticulture
- ∞ Level 6 Advanced Certificate in Horticulture in Kildalton College
 - Specialised in fruit and vegetable production
 - College PLP 16 weeks Ashtown research centre working with protected soft fruit

Background

I have been working since a young age on the family farm which is run in partnership between my father and uncle.

Overview and current role

Main tasks include tractor and machinery maintenance. Driving and harvesting make up a large percentage of my day to day work. I provide relief work managing the pack house for my father and uncle. Parsnips need to be harvested daily so there is always work to be done with no two days the same.

Future career goals

Diversify into different branches of farming and crops

Recommendations

Work hard on your placement as it could be a work opportunity in the future.

Mushroom Producer

Name: James Quinn
Address: Cahir, Co.Tipperary
Current position: Owner/Manager
Golden Vale Mushrooms



Education

- ∞ Level 5 Certificate in Agriculture
- ∞ Level 5 Certificate in Horticulture in Kildalton College

Background

I worked in poultry up until 1991 before I opened my first mushroom production unit in Monaghan in 1992. I relocated and built my new farm in Tipperary in 2000. After a number of expansions the farm is now currently in the process of reaching its target output of 40,000kg weekly.

Overview and current role

I am responsible for day to day management of staff including training and ensuring high standards of quality, hygiene and safety are achieved. I ensure all production leaving site is within specification and the entire growing, harvesting and cleaning operations are carried out sufficiently in order to meet current Bord Bia, Tesco and Global Gap standards.

Future career goals

I plan further expansion in the mushrooms industry this year and hope to branch out to an additional enterprise in 2017 and to set up my own marketing company. I plan to do further training in horticulture and the marketing of food produce.

Vegetable Producer

Name: Brian Duggan
Address: Paul Brophy Produce,
Naas,
Co. Kildare
Current position: Assistant Vegetable
Farm Manager



Education

- ∞ Level 5 Certificate in Horticulture National Botanic Gardens
- ∞ Level 7 BSc Horticulture WIT

Background

I had an interest in growing vegetables since I was young and worked with a local strawberry and lettuce grower. I started my PLP with Paul Brophy in the second year of my degree course. I did a lot of field work during that time – bed forming and spreading fertiliser.

Overview and current role

The typical day varies depending on the time of the year. Currently I am dealing with landowners putting land agreements in place. Later in the year I will look after our farm management software, making sure crop protection and fertiliser records are up to date for audits and inspections. I gather data throughout the year which I analyse to make important decisions for growing crops successfully. Precision farming is an important aspect of my job which involves machine guidance, sprayer technology, GPS soil sampling and variable rates of fertiliser spreading. I love my job because it is in an innovating and progressive business

where you are learning all the time. I am working with skilled staff who are willing to share their knowledge and expertise. The business practices precision farming so you are the cutting edge of growing which is very exciting.

Future career goals

I'm currently completing my Level 8 degree and I have applied to undertake a Masters course later this year.

Recommendations

Get good experience at Level 5 and get a broad range of practical hands-on skills. Make the most of your PLP to try and get a flavour for all aspects of the business. It's important to get practical experience in the industry and ask lots of questions as it will stand to you whether you go on to work or continue to study.

Landscape Construction



Job Title	General Operative/ Landscape	Landscape Foreperson	Landscape Gardener/ Manager/Designer	Business Owner
Formal Education	Leaving cert/ Level 5 Certificate in Horticulture	Level 6 Advanced Certificate in Landscape Design, Construction and Maintenance	Level 7/8 Bachelor of Science Horticulture	Level 7/8 Bachelor of Science Horticulture
Desirable Experience	None or limited	2-4 years	4-6 years	5 years +
Essential Skills	<ul style="list-style-type: none"> ☞ Daily plant care tasks ☞ Planting, general pruning, light garden maintenance including mowing strimming, hedge trimming ☞ Basic plant knowledge ☞ Basic construction skills e.g. paving, decking, small walls 	<ul style="list-style-type: none"> ☞ Design skills ☞ General landscape construction skills including, drainage, foundations, water features ☞ Planting and staking a wide range of trees bare root, root balled, spring ring etc. 	<ul style="list-style-type: none"> ☞ Design of public and private spaces ☞ Broad range of landscape construction skills ☞ Staff supervision ☞ Communication, Pricing ☞ Time management, Health and safety management 	<ul style="list-style-type: none"> ☞ Preparing plans budgets contracts ☞ Design and implementation of public and private spaces. ☞ Business adminingration, HR, accounting & SWOT analysis, ☞ Health and safety management ☞ Leadership ☞ Risk management
Suggested informal education	<ul style="list-style-type: none"> ☞ Attend horticulture open days ☞ GLAS ☞ Bloom ☞ Read trade publications 	<ul style="list-style-type: none"> ☞ Attend seminars & conferences e.g. GLIDA conference ☞ GLAS ☞ Bloom ☞ Read trade publications 	<ul style="list-style-type: none"> ☞ National and international garden design events ☞ ILLI lecture series ☞ Bloom, ☞ Read trade publications ☞ Start your own business training 	<ul style="list-style-type: none"> ☞ Read trade & business publications ☞ Business management training ☞ Personal development

Landscape Contractor

Name: Jim Kelly
Current position: Owner and Manager
Business details: Annual maintenance contracts, on-going landscaping projects and gardening projects.



Education

- ∞ Level 4 Award in Green-keeping 2011
- ∞ Level 5 Certificate in Horticulture 2012
- ∞ Level 6 Advanced Certificate in Horticulture 2013

Background

Carpentry and Block laying

Overview and current role

I work on a range of landscaping and garden maintenance contracts and set projects. I complete soft landscaping and a wide variety of hard landscaping on these projects. I have worked with some of Ireland's most recognised garden designers which came about after helping Alan Smyth Consultancy at Bloom in the Park in 2014. The gardens I have worked on at Bloom are: The Cape Cod Garden for Glenisk 2014, Goal Garden 2015 and Chicago Parks Department 2016.

Future career goals

I have enrolled in a Level 7 Degree Horticulture course on a part time basis over the next year. I would also hope to complete a design course in the near future.

Landscape Gardener

Name: Richard Cowman

Address: Tramore,
Co. Waterford

Current position: Assistant Garden
Manager

Business details: Assisting with
management and maintenance of a 1 hectare
garden at Lafcadio Hearn Memorial Gardens.



Education

- ∞ Certificate in Manufacturing Technology W.I.T.
- ∞ Qualified Carpenter & Joiner
- ∞ BSc in Horticulture 2012

Background

I worked in several very different employment positions throughout my career from manufacturing to construction and now horticulture. I am enjoying this occupation more than any other previous role. I really enjoy the benefits of working outdoors all year round and the opportunity to continue learning constantly.

Overview and current role

I am employed at Lafacadio Hearn Gardens which is located in the seaside town of Tramore in Co. Waterford. My role consists of all aspects of garden maintenance including planting, pruning, weeding, irrigation, tree staking, pond & stream maintenance etc. Organising and setting out daily duties for team of co-workers. I also assist members of the public and provide garden tours when necessary.

Future career goals

To continue to learn and improve in horticulture. Every day provides the opportunity to observe nature and enhance my knowledge in a therapeutic and peaceful setting.

Other Career Profiles Choosing a Different Path

Profile: PhD student
Name: Leanne Roche
Address: Co. Wexford
Current position: SOLAS Internship
Teagasc Johnstown
Castle, Co. Wexford



Education

- ☞ Level 7 Horticulture with Waterford Institute of Technology & Kildalton College
- ☞ Level 8 Horticulture UCD
- ☞ Currently doing Level 10 PhD Environmental Science

Background

I completed PLP for 32 weeks with Summerhill Landscapes in Long Island, New York, getting experience in garden maintenance, large landscaping projects, turfgrass & hydroseeding. This led to 3 years working with the same company followed by 9 months working in the Arboretum Garden Centre in Kilkenny.

Overview and current role

PhD in Environmental Science. A typical day involves taking field samples and writing my thesis and conference papers. I am currently involved in the project – ‘Fate and transport of fertiliser nitrogen under spring barley cultivation on contrasting soils’.

Profile: Garden Centre
Name: Helena Doherty
Location: Countrylife,
Monasterevin,
Co. Kildare
Current Position: GardenCentre Manager



Business Details

Countrylife Garden Centre Monasterevin is part of a large garden centre chain under the ownership of Glanbia Plc. The garden centre has a 3 star Bord Bia rating and operates as part of the larger agribusiness centre on site.

Education

After my Leaving Certificate I attended college at the National Botanic Gardens in Glasnevin where I studied amenity horticulture for 3 years with 1 year spent on PLP. This is where I gained scientific, theoretical and professional gardening skills – a most enjoyable and rewarding time. In 2015, I returned to the stunning National Botanic Gardens to complete a degree programme with Waterford Institute of Technology. This year at college has been most beneficial and rewarding and has opened doors for further educational opportunities.

Recommendations

I would advise anyone with a strong interest in gardening to attend one of many approved horticulture courses run throughout the country and especially to make the most of placement opportunities by soaking in as much knowledge as possible. A good plant knowledge is the basis for a successful career in this field. Get to know all the plants that grow in your area, join a local or online garden group and exchange knowledge.

Horticultural Green Certificate

The 'Green Cert' refers to a list of land based courses which qualifies a person as a 'trained farmer'. These could be in horticulture, agriculture, forestry or equine studies.

Having a 'Green Cert' is also one of the conditions of stamp duty exemption on the transfer of a farm to a close relation such as a son or daughter. It also meets the criteria for schemes or grants that may be available from time to time e.g. Young Farm Scheme and some horticulture grants.

In Teagasc College of Amenity Horticulture, and Kildalton College it is possible obtain either a QQI Level 6 Advanced Certificate in Horticulture or the Degree in Horticulture with WIT to achieve a 'Green Cert'.

Continuous Professional Development

The career profiles illustrate a range of new skills or Continuous Professional Development (CPD) which should create opportunities for graduates to progress in their chosen fields. According to the Sustainable Use Directive (SUD) all professional users of Plant Protection Products must now have a spray certificate if they are applying pesticides in a commercial capacity. Teagasc graduates who have already completed Horticulture Mechanisation and Plant Protection modules will now be able to apply for their spray certificate.

Teagasc offers CPD events including conferences and workshops which would be of benefit to students and graduates. Visit our web sites for upcoming events.

Information about Teagasc Horticulture Colleges & Waterford Institute of Technology

College of Amenity Horticulture, National Botanic Gardens, Glasnevin, Dublin 9

Teagasc has the pleasure of having a footprint in the National Botanic Gardens in Glasnevin. Significant developments have taken place in the last number of years delivering excellent classrooms, laboratories, design studio and computer room. Ashtown, a sister campus 5km away, has substantial new horticultural facilities. The OPW facilitate use of the gardens for students and allow students undertake practical training here also.

Kildalton Horticulture and Agriculture College, Piltown, Co. Kilkenny

Teagasc Kildalton College has been providing high quality horticultural education since 1971. The emphasis is on a mix of study and hands-on practical experience. There are substantial horticultural facilities on site for student training, including a commercial nursery, turfgrass / greenkeeping facility, mature and newly constructed gardens and a landscape construction unit, a fruit and vegetable production unit, including 4 hectares of orchards and protected crops. There is also a 1 hectare cut foliage species trial and various other projects on site carried out in conjunction with the Horticultural Development Department. In addition, there is a large collection of horticultural machinery on site for student training.

**Waterford Institute of Technology,
Cork Road, Waterford City**

Waterford Institute of Technology (WIT) offer a three year full-time (Level 7) course designed to train professional horticulturists. Graduates can subsequently gain an honours degree by completing an add-on year in Land Management in Horticulture. MSc and PhD qualifications in horticulture by research are also possible in WIT. The WIT Level 7 course in Horticulture is run in conjunction with Teagasc. Students can choose to study in Waterford or in Dublin and there are separate codes for each course.

Students studying in Waterford are registered to the WIT-Kildalton course (WD096) and a free shuttle bus transports students between the two study sites which are WIT on the Cork Road, and Teagasc Kildalton College, Piltown, Kilkenny. Students who are registered on the WIT-Botanic gardens course (WD097) study solely in Dublin at The National Botanic Gardens, Glasnevin.

Teagasc Education Contacts

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