

Your Degree in Horticulture...What Next?

HORTICULTURE is the art and science of the cultivation of plants. Horticulturists work and conduct research in the fields of plant propagation and cultivation, crop production, plant breeding and genetic engineering, plant biochemistry, and plant physiology. The work particularly involves fruits, berries, nuts, vegetables, flowers, trees, shrubs, and turf. Horticulturalists work to improve crop yield, quality, nutritional value, and resistance to insects, diseases, and environmental stresses.

The Irish horticultural industry has a farm gate value of €400 million and employs over 7,000 people. There are two distinct areas within horticulture: amenity and commercial.

Amenity Horticulture includes gardening, landscaping, designing and a whole lot more. It starts with the design and construction of recreational areas. These can be parks, nature reserves, wildlife gardens, and roadside plantings, amongst other designed landscapes. Amenity areas can be public, as with local authority parks, and roadside plantings, so important to wildlife. They can also be private, as in stately homes, apartment complexes and so on.

If you enjoy sport, remember an amenity horticulturist is likely to have designed, constructed and maintained the playing field, tennis court, running track, bowling green or golf course.

Commercial horticulture involves the growing and selling of food crops and ornamental plants. In the area of food production it is the horticulturist who faces the challenge of growing the fruit and the vegetables that we eat. The Department of Agriculture reports that growing potatoes and mushrooms are currently the two biggest areas of employment in this sector. Producing these crops is a very technical business, involving automated systems, controlled using state of the art computer technology, alongside traditional skills. Commercial horticulture includes floristry and retail horticulture too.

Job prospects are very good in this area as Irish people become more environmentally aware and show a greater interest in their gardens, in growing their own food crops, and in the outdoor world in general. In Northern Ireland, commercial horticulture employs around 5,000 people.

Degrees in CIT include:

- CR 011: **Bachelor of Science in Horticulture (Level 7)**
- Suitably qualified graduates are eligible to apply for entry to the one year add-on **Bachelor of Science (Honours) in Horticulture**
- Graduates of the programme can also pursue specialisations in areas such as Botany, Biotechnology and Business Management with other Higher Education Institutions in Ireland and abroad.

A Graduate in Horticulture typically will have the ability to:

- Demonstrate knowledge of a wide range of subject-specific facts and principles as well as an awareness of the current limits of theory and applied knowledge

- Use qualitative and quantitative information creatively and imaginatively to solve problems, suggest innovations and make decisions
 - Plan and conduct research or development, evaluate the outcomes and draw valid conclusions
 - Evaluate and interpret, in a balanced and critical manner, new information provided by others from a range of fields of study
 - Demonstrate awareness of relevant legal, moral, ethical, sustainability, environmental and social issues
 - Appreciate the need for professional codes of conduct
 - Use effectively skills in numeracy, communication and ICT
 - Use effectively interpersonal and team working skills
 - Develop the skills for self-management and lifelong learning e.g. working independently, time management and organisation skills
 - Display the potential for competence, behaviour and attitudes required in a professional working life including initiative and leadership skills.
 - (Refer to article: <http://wolframsworld.blogspot.ie/2010/05/gardens-and-horticulture-offer.html>)
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What are the 2015 graduates doing?

Company	Role
Self-Employed	Farmer
Floral Decor Ltd	Horticulture Technician
Bandon Co-op Kilbrogan	Assistant Horticulturist
SAP Nurseries Ltd	Trainee nursery person
Walton Court	Horticulturalist
Dwyers	Garden Centre assistant
Salvabuild	Director
Noxus Nurseries	Grower Manager

If you would like to know more about the First Destinations Survey please contact the Careers Office

CAREERS IN HORTICULTURE & RELATED FIELDS:

A degree in horticulture can qualify you for work in almost any industry that involves plants. While it is easy to categorise different careers within horticultural science and technology, many problems require more than one specialisation so many scientists will work in multidisciplinary teams to solve specific problems. This creates a complete range of career paths from the narrow specialist to the broad general scientist/engineer.

There are many science careers either within horticulture or interacting with horticulture and the topics below attempt to give a general flavour. However there are many more; for example engineers designing machinery or greenhouses and mathematicians studying plant populations, Plant Health Inspectors and Lecturers. In some careers, however, educational requirements can vary greatly, depending on the level of expertise required for the position.

The following list is meant to provide basic information on some of the more common careers in Horticulture and Horticulture-related fields.

Which area of Horticulture is right for you?

Plant Science & Technology

- **Horticultural Scientist / Crop Physiologist / Taxonomist**
- **Chemist** (Chemistry comes into all aspects of horticulture)
- **Food Scientist/Production:** concerned with issues as food safety, quality, nutrition, new food product development
- **Botanist/Plant Biologist**
- **Environmental Planning**
- **Landscape Scientist:** Landscape science is a chartered profession like architecture, accountancy or surveying. In order to pursue a career in the profession, you will need a degree followed by a period of study at work in order to qualify fully as a chartered landscape scientist.
You will also need to be a member of the Landscape Institute, the professional body, qualifying authority and regulator for the landscape architecture profession.
- **Plant Breeder / Geneticist:** A good honours or postgraduate degree is required to become a plant breeder. Relevant degree subjects include biology, genetics, molecular biology, biotechnology, botany and plant science, agriculture, crop and plant science or horticulture.
- **Propagation Scientist:** Propagation scientists study the best ways to create new plants from old by collecting seeds, taking cuttings or through micropropagation. This may be to propagate a new variety, to multiply a difficult to propagate plant or to save an endangered species. Propagation techniques can be taught on the job at nurseries, or learnt as part of a wide range of horticultural courses.
- **Journalist / public relations / consultant / field advisor / agronomist** Most scientists who move into these areas do so after an initial period working in another area of horticultural science. Those that enter these jobs directly do so with a science degree. To become a horticultural journalist you'll need to know about both horticulture and journalism. Many people start work as trained horticulturists and move into journalism, while others train as journalists and then learn about the world of horticulture. Can work in national/local newspapers, magazines, websites, professional trade press e.g. Horticultural week.
- **Enologist/Oenologist** – studies the science of wine and wine making
- **Research**
- **Plant Pathologist** – Studies plant diseases, their cause and their management
- **Teaching/Lecturing**

Production, Distribution and Retail

- Horticultural Retailing:
 - Garden Centre Management (and DIY)
 - Florist Management: work for independently owned florist shops to major chains (eg Interflora)
 - Supermarket Chain Management i.e. Vegetable and Fruit Ornamental Section (e.g. Dunnes Stores, Tesco, Lidl, Aldi etc.)
- Online Business:
 - Internet sales of various horticultural goods and services
- Management of Wholesales Supplies and Distribution:
 - Wholesale Supplies to Retailers and other sections of the Horticultural Industry e.g. National Agrochemical Distributors, Unichem Ltd, Mc Loughlans RS, King Fischer,
 - Compost Suppliers like Bord na Mona, Growmoor, Bulrush, Westland, Garden/ Horticultural Tools
 - Equipment Suppliers i.e. True Temper

- Greenhouse Suppliers i.e. Richel (Highbank Tunnels in Ireland), Colm Warren Polytunnels etc.,
- Supplying each sector from Turfgrass for example to Horticulture machinery i.e. tractors etc
- Irrigation supplies
- Agrochemicals supplies such as Pesticide and Fertiliser suppliers e.g. Irish Fertiliser Industries (IFI) or equivalent (and many more specific wholesale Irish and International suppliers)
- **Fruit and vegetable grower**
- **Floriculturalist** – horticulturalist specialising in cut flowers, bedding plants and potted plants
- **Pomologist** – specialising in the production and marketing of tree fruits, tree nuts and small fruits
- **Nursery/Floral Production Manager**
- **Nursery Stock/Logistics Manager**
- **Ornamental Plant Grower**
- **Management, Technical advisory, consultation, quality assurance and Sales/Marketing positions**, either working for companies or within your own business

Heritage & Conservation

- **Environmental Education Officer:** is generally responsible for promoting environmental conservation and sustainable development. This is done through visiting schools and working on in-school projects; working with businesses and community groups; giving talks; producing educational resources and websites; leading guided nature walks; providing training courses on relevant issues; and helping with volunteer activities and conservation projects. Many gardens employ education officers for schools visiting gardens.
- **Garden Historian**
- **Nature Conservation Officer** works to protect, manage and improve the local environment. They encourage people to use the countryside and promote awareness of and understanding about the natural environment. They develop policy and ensure that it is delivered. Nature conservation officers are employed in small numbers in a wide range of organisations. Local authorities, utilities companies and other private companies, such as consultancies, private estates, engineering companies (particularly those concerned with road building), and housing developers are all likely to employ nature conservation officers.
- **Forestry:** This is the art, science, and practice of managing forests and plantations. Ireland is fortunate in that it has one of the most suitable climates in the world for growing trees. Around 10% of Irish land is in forest and it is an area that government is committed to increasing. There are over 11,000 people directly employed in forestry in Ireland, in activities such as planting, harvesting, transport and processing timber. The Government has a forestry trajectory which aims to double this figure over the next 10 years.

Landscape Design, Construction and Maintenance

- **Interior Landscape designer** - Bring colour and greenery indoors by designing indoor planting schemes in offices, atriums, shopping centres, restaurants and health clubs. Can work within private interior landscaping or landscape maintenance firms, including franchise opportunities.
- **Landscape architects** - study, plan, design and manage spaces which are both sustainable and beautiful. They work with architects, town planners, civil engineers and lots of other professionals. Landscape architecture is a chartered profession like architecture, accountancy or surveying. This means that in order to pursue a career in the profession, you will need a degree followed by a period of study at work in order to qualify fully as a chartered landscape architect. You will also need to be a member of the Landscape Institute, the professional body, qualifying authority and regulator for the profession. Can work with private companies, local authorities and government agencies.
- **Garden Designer** – including historic garden restoration, public spaces or school grounds design (Check out society of Garden designers). Can work as a one-person business, within larger garden contracting/maintenance firms or for the big house-building firms.
- **Landscape Construction/Manager**
- **Gardener/Garden Centre Manager**

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- Arboriculturist/Tree surgeon
- Greenkeeper / Groundsman / Parks Policy and Development Officer
- Graveyard/Cemetery Keeper
- Park Ranger
- Landscape Contractor
- Grounds Maintenance Contractor
- Turf Management

Health & Wellbeing

- **Green Gym Manager** (helping people keep fit through 'green fingered' projects)
- **Horticultural therapy** allows you to work in the caring profession, but with a horticultural slant, helping people to overcome disability, making it doubly rewarding.

POSTGRADUATE STUDY

Gaining a postgraduate qualification brings with it many benefits. It enables you to gain further more specialised knowledge of your field of study; it can give you a specific technical, vocational or professional qualification and facilitate you in developing a range of key skills including: research, analysis, evaluation and written communication.

For further information, go to the 'Further/Postgraduate Study' link on the Students page of our website;

<http://www.mycit.ie/careers>.

See also www.postgradireland.com; www.prospects.ac.uk

Ideally you will spend a lot of your final year carefully researching your options which includes **graduate employment or further study**.

Register with gradireland to get email alerts on employment opportunities as well as job search advice

www.gradireland.com

Get a copy of the **Gradireland Careers Directory** for Ireland (north and south) which is available at CIT's Careers and Counselling Service, 2nd Floor, Student Centre.

Europe Erasmus Mundus

- Wide range of low cost and funded postgrad courses in Europe which cover every discipline. Netherlands, Germany, Sweden and Switzerland have particularly low fees. A long list of courses are delivered in English
- Netherlands: www.nuffic.nl Germany: www.daad.ie Sweden: www.studyinsweden.se Switzerland: www.swissuniversity.ch

FURTHER RESOURCES

The following websites have some very useful information about the Horticulture sector in Ireland

- www.bordbia.ie/industry/buyers/industryinfo/hort/pages/default.aspx
- www.teagasc.ie/horticulture
- www.agriculture.gov.ie/farmingsectors/horticulture
- www.dardni.gov.uk
- www.coillte.ie
- www.societyofirishforesters.ie
- www.bim.ie
- www.askaboutireland.ie/enfo

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- www.biotechnologyireland.com
- Centre for Organic Horticulture Research, School of Biological, Earth and Environmental Sciences, UCC
<http://www.ucc.ie/en/bees/research/resgrps/>

Websites with job advertisements:

- www.hortitrends.com
- www.hortweek.com
- www.jobsinhorticulture.ie
- www.growcareers.info
- www.agriculture.gov.ie - Departments of Agriculture in Ireland and abroad e.g. USDA in US can be big employers of Level 8 graduates
- www.horticulturejobs.co.uk
- www.gradireland.com
- www.prospects.ac.uk/environment_agriculture_sector.htm
- www.horticruitment.com – specialist recruitment agency for the horticultural industry
- www.careerjet.ie/horticultural-jobs.html
- www.irishjobs.ie/Agriculture-Horticulture-Jobs
- www.simplyhired.ie/a/jobs/list/q-horticulture
- www.gumtree.ie/fp-jobs/horticulture

Volunteering: www.conservationvolunteers.ie, also on Facebook

Professional bodies:

- **The International Society of Horticulture Science (ISHS)** is the international umbrella organisation and all graduates should be members
- **Institute of Horticulture** – www.horticulture.org.uk represents all those professionally involved in horticulture in the UK and Ireland. You will find an extensive section on careers including a wide range of job profiles.
- **Royal Horticultural Society** - www.rhs.org.uk is one of the world's leading horticultural organisations. The website contains [information](#) about careers in horticulture as well as details of training and education.
- **American Society for Horticultural Science** - www.ashs.org
- **The Society of Garden Designers** - www.sgd.org.uk
- **The Irish Landscape Institute** - www.irishlandscapeinstitute.com