



# HCT

Progressive, Innovative & Interactive Training



## Soil Science and Growing Media

LEVEL 5



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QQI AWARD

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## Soil Science and Growing Media

**Programme Aim:** This programme has been designed to help enable participants to develop the knowledge and skills necessary to be familiar with origins, characteristics and properties of soils and soil-less growing media, which will enable learners to be capable of manipulating the properties of soil to support crop production. On completion participants will have practices of soil nutrition and cultivation and have developed care and foster a respect for the environment as a finite resource. Participants will learn all this information while have safe working practices with agrichemicals, the environment and dealing with its machinery

### Participants on this programme will:

- Explain the origin of soils to include parent rock types and the role of physical, chemical and biological factors in soil formation and Investigate the structure and composition of a variety of soil profiles
- Describe the physical characteristics of soil and non-soil growing media including its components, texture, structure, hydraulic conductivity, air filled porosity, potting mixes, hydro culture and suitability for various crops
- Understand the chemical characteristics of soil and growing media including pH and its effects on nutrient availability, cation exchange capacity, buffering capacity and liming requirements
- Use a range of techniques to assess the physical properties and nutrient status of soils and growing media including soil sampling, pH and SC measurement and result interpretation
- Summarise the characteristics of the major soil groups found in Ireland

### Programme Content

- Learn the of physical, chemical and biological factors in soil formation
- Identify the inorganic and organic components of soil
- Complete soil samples and measure the percentage of different soils air water and organic matter.
- List the major nutrients and micronutrients required for plant growth
- Compare the following fertiliser types inorganic, organic, straight, compound, liquid and controlled release.
- Prepare suitable media for the production of sidelines container grown nursery stock and rooting cutting.
- Evaluate the following as a growing medium, peat, bark, coir, hydroponics and john inns composts no. 1, 2 and 3

### Specific Support Available

A range of accommodations and supports are possible according to specific needs. This programme comes with a very comprehensive manual as an excellent source of reference after the programme

Programme level	This programme leads to a Level 5 on the National Framework of Qualifications
Progression and Credit Value	Horticulture 5M2586 This programme is worth 10 Credit of 120 to achieve a Major Award
Duration	This programme will run for 5 contact days depending on the project and will require participants to complete some work in their own time
Who should attend this course	People seeking skills in or are looking to gain formal qualification in Horticultural Science
Required fluency in generic skills	Learners entering a programme leading towards an award at Level 5 will usually be proficient at reading, drafting, preparing and understanding information across a broad range of topics, including quantitative information. Learners may solve predictable problems well, independently and as part of a group. Learners participate well in a chosen area of expertise, using a range of tools and procedures, responsibly and autonomously.
QQI Assessment	Participants who wish to achieve a QQI Component Certificate must complete 60% Examination, 20% Assignment, 20% Skills Demonstration
Resources Required in Order to Successfully Complete the Module	Some personal learning / study time will be required from participants. Programme packs, Assessment Briefs and some equipment will be provided as a part of the programme
Specific Entry/Access & Exemptions required	A learner seeking entry to a programme leading to awards at level 5 does not need a previous formal qualification. HCT would highly recommend that that learners have achieved some certification at Level 4 or have relevant work/ life experience

## Soil Science and Growing Media 5N2530