Optimising nutrient management for field vegetables

Optimise yield and quality • Reduce costs of nutrients
Save time and money through more effective nutrient management

Designed for:

Individuals wanting to optimise yields and quality and apply the latest thinking on the management of soil nutrient supply and plant uptake of nitrogen (N), phosphorus (P), potassium (K), sulphur (S), magnesium (Mg) and micro-nutrients for field horticultural crops

Entry requirement: An intermediate course best suited to those who are **able** to demonstrate some practical experience

Price: £225 + VAT

Duration: A one day classroom-based course

CPD points: CPD points to be awarded

Learning outcomes:

At the end of this course you will be able to:

- Assess a soil's ability to supply macro-nutrients
- Understand the impact of legislation e.g. nitrate vulnerable zone (NVZ) with N-Max and minimise the risk of pollution
- Use The Fertiliser Manual (RB209) for best practice application of nutrients
- Plan fertiliser applications according to soil nutrient supply and plant needs incorporating ideal timings and methods for application.
- Judge the suitability of different forms of N, P, K, S and Mg
- Use fertiliser carbon footprints and understand abated and non-abated sources of N
- Determine the contribution of organic manures, bio-solids and other amendments to the nutrient requirement of crops
- Maximise uptake and use efficiency/minimise losses verus any soil compaction, cultivation and soil moisture deficit and irrigation challenges
- Assess the benefits of spatially variable application for N, P and K, and liquids versus solids
- Comply with legislation: organic manure, bio-solids and fertiliser use, and FIAS legislation, e.g. storage of on-farm fertiliser
- Diagnose and correct nutrient deficiencies
- Understand principles and pitfalls of nutrient uptake assessment in field crops
- Measure yield and quality of crops and how to correctly assess the impacts of changes in application, dose, timing and type of fertiliser
- Identify opportunities to improve quality, e.g. shelf life in salads or vegetables

NM02

Nutrient Management

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01223 342444 info@artistraining.com @ARTIStraining

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Content:

Classroom module 1 (half day) – Soil and crop nutrient supply and demand:

- How nutrients exist in soil, their interactions and what determines soil nutrient availability to plants (including soil compaction and soil water management)
- Best practice for soil nutrient testing, interpretation of laboratory analysis and how to adjust fertiliser applications in relation to soil nutrient supply
- Value of organic amendments; how to use their contribution versus inorganic fertiliser use
- Estimating field horticultural crop fertiliser requirements for yield and quality
- Micro-nutrient deficiencies – how to identify and manage to prevent and remedy
- Different forms of N, P, K, S and Mg fertilisers plus use of solids versus liquids and compounds versus straights
- Relevant legislation and compliance e.g. NVZs

Classroom module 2 (half day) – Recent developments in nutrient management:

- Compliance with Red Tractor and other assurance standards
- Carbon footprints, reducing emissions and understanding the impact of different types of fertiliser
- Responsiblities under the Fertiliser Industry Assurance Scheme (FIAS)
- Measuring yield of crops before and after any changes to nutrient practice
- Principles and pitfalls of measuring nutrient uptake by plants
- Identify opportunities to improve quality and shelf life with correct and amended nutrition

Trainer: Paul Lewis, Senior Lecturer, Crop & Environmental Services Dept, Harper Adams University