

# Best practices in water management and irrigation

Optimise yield, quality and crop value • Reduce water use and energy costs  
Reduce nutrient losses

## Designed for:

Individuals who wish to understand how best to manage the irrigation of potato, field vegetable and salad crops to improve crop yields and quality

## Entry requirement:

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

## Price:

£225 + VAT

## Duration:

One day classroom-based course

## CPD points:

12 BASIS points; 1 NRoSO point

## Learning outcomes:

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

- Evaluate a parcel of land for irrigation and prepare a management plan accounting for soil texture and condition, topography, irrigation infrastructure and crop to optimise crop yield and quality
- Review current soil condition and previous cultivations to establish the best management practice for optimal water retention and crop uptake
- Assess soil texture and variability to inform soil moisture measurement and irrigation scheduling
- Assess the water holding capacity of soils and the amount available for crop uptake
- Assess the irrigation demand of a range of crop species across the season
- Assess soil moisture by direct soil/field measurements or by using crop and weather data
- Evaluate irrigation delivery systems and match these to the needs of the crop and the site
- Measure and record irrigation applications for quantity and uniformity and optimise for factors that affect efficient delivery (e.g. droplet size; system operating pressure)
- Implement appropriate strategies when water supplies or application capacity is insufficient to meet demand

- Develop crop/site specific irrigation schedules and evaluate the quality of water for irrigation
- Comply with abstraction license and other environmental legislation
- Evaluate the cost of different irrigation systems

## Content:

**Classroom module 1** (half day) – The principles of irrigation management:

- Yield and quality benefits of irrigation for different crop species
- Assessing the site and field condition to inform irrigation management decisions
- Understanding field capacity, crop available water supply; infiltration rates for different soil types
- Estimating soil moisture using soil moisture sensors or modelling techniques
- Developing crop irrigation schedules for a range of crop species

**Classroom module 2** (half day) – Optimising irrigation in practice:

- Examples of commonly used soil moisture sensors – their benefits and limitations
- Irrigation application equipment – review of the types of equipment available, including rain guns, booms, linear irrigators and drip systems
- Key actions to optimise performance of equipment including operating pressures and droplet size
- Recording water use and application uniformity
- Compliance with relevant environmental legislation
- Applying irrigation effectively and efficiently during a cropping season, with worked example

## Trainer:

Dr Mark Stalham, Head of Potato Agronomy Group, NIAB CUF

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