

# LANAgC4 – SQA Unit Code H58B 04

## Monitor and maintain the provision of nutrients to crops



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### Overview

This standard covers monitoring and maintaining the provision of nutrients to crops. You will require knowledge of the principles of plant growth and development as well as plant health.

If you are working with chemicals or machinery you need to be appropriately trained in line with current legislation, and hold a relevant award where appropriate.

You must carry out your work in a way which will consider any impact on the natural environment and enhance its nature and conservation.

This standard is suitable for anyone who monitors and maintains the provision of nutrients to crops.

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### Performance criteria

- You must be able to:*
- P1 assess the risks associated with the site and the required activity
  - P2 effectively monitor the growth and development of crops in accordance with specifications
  - P3 carry out soil sampling and tissue analysis where necessary
  - P4 assess plant condition and identify the nutrients required
  - P5 seek technical advice regarding suitable actions where necessary
  - P6 confirm that the selected product is appropriate for the work
  - P7 confirm that suitable personal protective equipment is available
  - P8 calculate the minimum application rate to achieve the desired result
  - P9 implement the application of nutrients in accordance with specifications
  - P10 monitor and evaluate the effectiveness of the application of nutrients
  - P11 ensure equipment is used and maintained in a safe and effective condition
  - P12 ensure suitable levels of hygiene and biosecurity are maintained
  - P13 ensure work is carried out in a manner which minimises environmental damage
  - P14 ensure waste is dealt with safely and correctly in accordance with legislation
  - P15 carry out all work in accordance with relevant environmental and health and safety legislation, risk assessment requirements, codes of practice and company policies
  - P16 ensure appropriate records are completed as required by relevant legislation and the organisation

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### Knowledge and understanding

*You need to know and understand:*

- K1 how to identify hazards and assess risks
- K2 how to interpret risk assessments
- K3 the importance of carrying out an environmental assessment of the site before starting work and the findings which may affect required activity
- K4 the stages of plant development for application of nutrients
- K5 the requirements, advantages and disadvantages of different crop production systems
- K6 the principles of sustainable crop production
- K7 the ways of checking that the correct quantity of nutrients are available to plants and the importance of soil and tissue analysis
- K8 the meaning of pH and how to establish it
- K9 sources of technical advice regarding suitable actions
- K10 the purpose of applying nutrients and how nutrients can be adjusted to encourage the crop to establish
- K11 types of nutrients which may be applied to the crop and the application methods which must be used
- K12 the role of the main major and trace elements e.g. nitrogen, sulphur, magnesium, potassium and phosphorus
- K13 different forms of fertilisers available and the appropriate use of each
- K14 nutrient requirements for different groups of plants
- K15 how to calculate the amount of nutrient required and the procedures for preparation
- K16 how to transport and store fertiliser and containers according to legislation and specifications
- K17 problems which may occur with the provision of nutrients and the action to take
- K18 the equipment required for the job and how to ensure that it is used and maintained in a safe and effective condition
- K19 methods of maintaining hygiene and biosecurity and the reasons why it is important
- K20 the legal and organisational requirements for the handling, transport, storage and disposal of waste
- K21 your responsibilities under relevant environmental and health and safety legislation, codes of practice and company policies
- K22 appropriate records to be kept and their significance

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### Glossary

Specifications: schedules, method statements, Standard Operating Procedures (SOPs), manufacturers' guidelines, customer requirements, crop requirements

Instructions: verbal or written

Sustainable agriculture: Meeting the requirements for food production while maintaining profitability and preserving the environment.

Nutrients:

- organic sources
- inorganic sources

Records: manual or computerised

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**Relevant occupations** Farmer; Supervisor; General Farm Worker

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**Suite** Agricultural Crop Production

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