

Monitor and maintain the healthy growth of crops

Overview

This standard covers monitoring and maintaining the healthy growth of crops.

You will be able to monitor the growth of crops, take the necessary action to maintain the healthy growth of the crop and control risks to crops from weeds, pests, diseases and disorders. This could include the application of nutrients to promote healthy growth or the implementation of suitable methods to control weeds, pests, diseases or disorders.

When working with machinery or equipment you should be trained and hold current certification where required.

When carrying out your work you must consider the impact it will have on the environment.

The standard is suitable for those with responsibility for monitoring and maintaining the healthy growth of crops.

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Performance criteria

You must be able to:

1. assess the risks associated with the activity to be carried out
2. wear suitable clothing and personal protective equipment (PPE)
3. **monitor the growth and development of crops** in accordance with **instructions and specifications**
4. assess the soil condition and nutrient status for the crop
5. seek technical advice regarding nutrient requirements and the suitable actions to take, when required
6. determine the nutrients required to maintain healthy growth and how they should be applied to the crop
7. implement methods of applying the required nutrients to the crop
8. assess risks to the crop from weeds, pests, diseases and disorders
9. seek technical advice regarding the control of weeds, pests, diseases and disorders and the suitable actions to take, when required
10. determine the method of minimising risks to the crop from identified weeds, pests, diseases or disorders to achieve the best balance between production requirements, environmental impact and the purpose for which the crop is being grown
11. implement methods of controlling weeds, pests, diseases and disorders in the crop, in accordance with relevant legal requirements and business practices
12. confirm, where chemicals have been applied to the crop, that they are used in accordance with relevant legal requirements and business practices
13. monitor and evaluate the effectiveness of all actions taken to maintain the healthy growth of crops
14. confirm that hygiene and bio-security are maintained in accordance with business practices
15. maintain communication with colleagues and others involved in, or affected by, your work
16. follow industry and business guidance to minimise environmental damage
17. confirm that waste is processed safely and correctly, in accordance with relevant legal requirements and business practices
18. confirm that business environmental and health and safety policies and risk assessment requirements are put into practice

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- across your area of responsibility
19. confirm that records are maintained and stored as required by relevant legislation and the business

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Knowledge and understanding

You need to know and understand:

1. how to identify hazards and assess risks
2. the type of clothing and personal protective equipment (PPE) suitable for the activity
3. the requirements, advantages and disadvantages of different crop production systems
4. the principles of **sustainable agriculture** and Integrated Crop Management (ICM)
5. the stages of crop development
6. how to determine the optimum time for monitoring the growth and development of crops given the crop requirements, the stage of growth, the time of year and the potential risks from weeds, pests, diseases and disorders
7. the methods that can be used to **monitor the growth and development of crops**, including the use of thresholds and schedules
8. the problems of soil compaction
9. the ways of checking that the correct amount of nutrients is available to crops
10. the meaning of pH and how to establish it
11. the role of **major and trace elements** in the healthy growth of crops
12. the nutrient requirements for different crops
13. the sources of technical advice about the suitable actions to take to provide nutrients to crops
14. the purpose of applying nutrients and how they can be adjusted to encourage the healthy growth of crops
15. the types of nutrients that may be applied to the crop and the application methods that must be used
16. the different forms of fertiliser available and how they should be used
17. how to recognise the presence of weeds, pests, diseases and disorders that may affect the crop
18. the sources of technical advice about the suitable actions to take to control weeds, pests, diseases and disorders
19. the purpose and requirements of Integrated Pest Management (IPM)
20. the range of **different actions** that may be taken to protect crops

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from weeds, pests, diseases and disorders in accordance with different production systems, and the implications of not taking action

21. the methods of **pest control** that may be used and how to maximise the effectiveness of these
22. the purpose and use of chemicals on crops and the possible implications for the operator, the crop, the environment and the consumer
23. the requirements of legislation in relation to the handling and use of chemicals
24. manufacturer's labels and data sheets in relation to the preparation and use of chemicals and the correct methods of application
25. the importance of monitoring and evaluating the outcome of all actions taken to maintain the healthy growth of crops
26. the importance of maintaining hygiene and bio-security while maintaining the healthy growth of crops and the methods for achieving these
27. the importance of maintaining communication with those involved in, or affected by, your work and how this should be done
28. the potential impact that your activities could have on the environment and ways in which this can be minimised, including NVZ (Nitrate Vulnerable Zone) considerations, water pollution and the impacts of overdosing on plant health
29. how to handle, transport, store and dispose of waste in accordance with relevant legal requirements and business practices
30. your responsibilities under relevant environmental and health and safety legislation, codes of practice and business policies
31. the records that need to be kept and the importance of completing them

Glossary

Different actions to combat weeds, pests and disease include:

- crop covers
- rotation
- variety choice
- inter-row cultivation
- stale seedbeds
- minimum till

Instructions and specifications:

- drawings/plans
- schedules
- method statements
- Standard Operating Procedures (SOPs)
- manufacturer's guidelines
- customer requirements
- crop requirements
- verbal instructions

Major and trace elements:

e.g. nitrogen, sulphur, magnesium, potassium and phosphorus

Monitor the growth and development of crops:

- desired healthy growth
- pests, diseases and disorders
 - animal
 - insect
 - viral
 - bacterial
 - fungal
 - nutrient
 - trace element deficiency
 - drought
 - water logging

Pest Control:

- fencingscarers
- repellents
- shooting

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- biological
- chemical
- use of beneficial insects

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

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