

Title	Design pest and disease control programmes for sports turf surfaces		
Level	5	Credits	8

Purpose	People credited with this unit standard are able to: complete a preliminary assessment of a pest or disease problem of a sports turf area; identify factors influencing the effectiveness of control measures using information on the biology of the pest or disease; and design, and implement, a pest or disease management programme for a sports turf organisation.
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Classification	Sports Turf > Sports Turf Management
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Available grade	Achieved
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Guidance Information

- 1 Legislation relevant to this unit standard includes but is not limited to:
 - Health and Safety at Work Act 2015;
 - Hazardous Substances and New Organisms Act 1996;
 - Resource Management Act 1991;
 - and any subsequent amendments.

- 2 Definitions

Biological control methods – predators and parasites, sterile insect release, endophyte, resurgence, replacement, resistance. For diseases refer to competition, hyper-parasitism, antibiosis, plant resistance and genetic modification.

Chemical control methods – insecticides, miticides, fungicides, bactericides, timing of applications, water rates, mode of action, formulations, adjuvants, residual activity, health and safety issues, compliance with requirements of applicable legislation.

Cultural control methods – fertilisation, pH adjustment, mowing, thatch control, exposure to dew, sanitation, irrigation, shading, wind, sowing time, use of resistant varieties.

Other control methods – biosecurity, legislation and regulations.

Pathway analysis – to identify and intercept the disease or pest at a point during its life cycle.

Workplace procedures – policies and procedures on safety and operation, and guidelines set down by the employer, host organisation, or codes for pest and disease control programmes. Workplace procedures should reflect current legislation.

- 3 For the purposes of assessment:
 - evidence submitted for assessment includes the assessment of pest and disease control needs of an operational sports turf organisation
 - evidence must be presented in accordance with workplace procedures.

Outcomes and performance criteria

Outcome 1

Complete a preliminary assessment of a pest or disease problem of a sports turf area.

Performance criteria

1.1 Identify and describe methods used to diagnose a pest or disease problem.

Range methods may include but are not limited to – pathway analysis, experimental tasks, laboratory analysis (cultures, plant and soil), identification of turf species which may be affected, signs and symptoms, season of appearance; evidence of at least two is required.

1.2 Identify the initial problem, using a selected method and determine if further investigation is required.

1.3 Support and justify preliminary diagnosis by documented findings.

Range includes – evidence for rejection or elimination of alternative pest and/or disease causes of the problem.

Outcome 2

Identify factors influencing the effectiveness of control measures using information on the biology of the pest or disease.

Performance criteria

2.1 Identify the way in which factors influence the control of selected pests and diseases by documented findings.

Range key factors may include but are not limited to – susceptible parts of the life cycle, environmental factors, management practices, soil conditions, plant condition, health and safety considerations, compliance with requirements of applicable legislation; evidence of at least two factors is required.

2.2 Identify the types of control methods for a pest or disease of sports turf.

Range control methods include but are not limited to – Integrated Pest Management (to include cultural, biological, chemical, other control, genetic), decision support systems.

Outcome 3

Design a pest or disease management programme for a sports turf organisation.

Performance criteria

- 3.1 Analyse the organisation's records to determine current pest and disease control methods, status of control programme, and current management methods.
- 3.2 Design the pest and disease management programme based on at least two information sources which are relevant and applicable to the organisation's requirements and using industry accepted procedures and formats for programme design.
- Range information sources may include but are not limited to – commercial documents and publications, research documents and publications; includes – justification and alternative controls, implementation schedule, basic cost/benefit analysis, health and safety considerations.
- 3.3 Design the pest and disease management programme to meet external influences and requirements.
- Range may include but are not limited to – legislative compliance, environmental factors.

Outcome 4

Implement the pest and disease control programme for a sports turf organisation.

Performance criteria

- 4.1 Implement the programme in accordance with workplace procedures.
- 4.2 Identify any issues; implement adjustments to programme as required, and document changes.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	27 March 2006	31 December 2019
Review	2	25 January 2018	31 December 2022
Review	3	28 January 2021	N/A

Consent and Moderation Requirements (CMR) reference	0037
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Primary Industry Training Organisation standards@primaryito.ac.nz if you wish to suggest changes to the content of this unit standard.