



Australian Government

Department of Education, Employment and Workplace Relations

RTC2404A Treat plant pests, diseases and disorders

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This competency standard covers the process of treating plant pests, diseases and disorders using cultural, biological and chemical methods. Treatment will follow strict work instructions and will be under supervision. Competency involves the application of knowledge and skills in recognising common plant pests, diseases and disorders, monitoring and recording the severity of the plant pest or disease problem, applying a range of treatments, and recording relevant information.

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Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

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Element	Performance Criteria
1 Prepare to treat plant pests, diseases and disorders	1.1 Plant pests, diseases and disorders which impact on commercial crops, gardens and turf, and natural areas are recognised by common name. 1.2 Details of the plant pest, disease and disorder occurrence are recorded and reported to the supervisor. 1.3 Treatment methods are selected in consultation with the supervisor. 1.4 Equipment is selected and prepared for use according to enterprise guidelines and manufacturers specifications. 1.5 OHS hazards are identified, risks assessed and reported to the supervisor.
2 Apply treatments to plant pests, diseases and disorders	2.1 Suitable personal protective equipment (PPE) is selected, used, maintained and stored. 2.2 Treatments are prepared according to supervisor's instructions and manufacturers guidelines. 2.3 Treatments are applied in such a way that non-target damage is minimised. 2.4 Treatments are applied according to OHS and regulatory requirements.
3 Carry out post treatment operations	3.1 Equipment is shut down and cleaned with full consideration of environmental impacts. 3.2 Treatment waste is disposed of causing minimal environmental damage. 3.3 Records are maintained according to enterprise guidelines.

Required Skills and Knowledge

Not applicable.

Evidence Guide

What evidence is required to demonstrate competence for this standard as a whole?

Competence in treating plant pests, diseases and disorders requires evidence that the common plant pests, diseases and disorders have been recognised and appropriately treated. The skills and knowledge required to treat plant pests, diseases and disorders must be **transferable** to a different work environment. For example, this could include different plant pest and diseases, locations and treatment techniques.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

Recognition of common plant pests, diseases and disorders for a particular enterprise/situation.

Different types of control measures and their principles.

Modes of action of different chemicals.

Legislation relation to the use of chemicals for plant pest, disease and disorder control.

OHS responsibilities of employees.

Environmental considerations when using chemicals for plant pest, disease and disorder control.

OHS legislative requirements and Codes of Practice.

Correct wearing/fit of personal protective equipment.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

Read and interpret chemical labels, Material Safety Data Sheets (MSDSs), manufacturers specifications for setting up equipment, and maintain spray records.

Prepare to treat plant pests and diseases.

Apply plant pest, disease and disorder treatments.

Carry out post treatment operations.

Wear personal protective equipment appropriate to task.

What processes should be applied to this competency standard?

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the **key competencies**, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

1. How can **communication of ideas and information (1)** be applied?

Ideas and information relating to applying plant pest, disease and disorder treatments should be discussed with other members of the work team and the supervisor.

2. How can **information be collected, analysed and organised (1)**?

Information will be collected by inspecting the plant pest or disease and the information gained will be recorded and discussed with the work team and supervisor. Enterprise work procedures and control programs should be consulted, interpreted and applied with clarification from the supervisor where necessary.

3. How are **activities planned and organised (1)**?

Equipment, materials and work procedures for applying treatments will need to be arranged before and between work periods, and there may be some responsibility for coordinating work with others.

4. How can **team work (1)** be applied?

The application of treatments may involve working with other members of a team to complete the program and ensuring other activities are scheduled around the application of plant pest or disease treatments.

5. How can the use of **mathematical ideas and techniques (1)** be applied?

Mathematical ideas in relation to calculating rates, and areas, will be required.

6. How can **problem-solving skills (1)** be applied?

Problems solving may be demonstrated in cases of machinery malfunctions or chemical spillage.

7. How can the **use of technology (1)** be applied?

Technology may be applied in the preparation, use and maintenance of spray equipment.

Are there other competency standards that could be assessed with this one?

This competency standard **could** be assessed on its own or in combination with other competencies relevant to the job function.

There is critical information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to both the **Assessment Guidelines** and the relevant **Sector Booklet**.

Range Statement

Range of Variables

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work contexts

What may be included under **plant pests, diseases and disorders**?

Plant pests and diseases may include chewing, sucking and boring invertebrates, nematode, fungi, viruses, and bacteria. Disorders include toxic soil, air and water. This unit excludes vertebrate pests, nutrient deficiencies and extreme environmental conditions.

What type of **details** about the plant pest or disease might be required?

Details might include location and occurrence of plant pests, diseases and disorders, possibility of off target damage and potential threats that the plant pest or disease may present to surrounding areas.

What **treatments** might be applied?

Treatments may include use of fertilisers, foliar nutrients, insecticides, fungicides, dips, release of biological agents, pheromone traps, baits, hormones, cultivation, slashing, cutting, burning and ripping.

What **equipment** is appropriate for treatment application?

Equipment may include backpack sprayers, spray tanks, fertiliser spreaders, ladders, rippers, pesticide applicators and handsaws.

What **OHS hazards** might apply to this standard?

OHS hazards may include use of hazardous chemicals, use of tractors and machinery, solar radiation, and working from ladders.

What or who may be at **risk** from OHS hazards?

Hazard may cause risk to workers, equipment, people and animals external to the workplace (such as members of the public, wildlife, pets, bees, fish, birds), and the environment.

What **personal protective equipment (PPE)** may be required to apply treatments?

Personal protective equipment may include hat, rubber boots, chemical resistant overalls, gloves, goggles, respirator or facemask, sunscreen lotion.

What **OHS requirements** might apply to this standard?

OHS requirements may include identifying hazards, assessing and reporting risks, cleaning, maintaining and storing tools and

equipment, appropriate use of personal protective equipment including sun protection and drinking to avoid dehydration, safe operation of tools and equipment, personal hygiene and reporting problems to supervisors, appropriate use, maintenance and storage of personal protective equipment, safety procedures in chemical handling and use, safety procedures for the protection of others.

What **regulatory requirements** might apply to this standard?

Regulatory requirements may include the use and disposal of chemicals, record keeping, transport of chemicals, and access to area.

What **environmental impacts** may apply to this standard?

Environmental impacts may include leaching and contamination of the water table, soil contamination, spray drift, damage to off target organisms, contaminated produce, surface run off, changes in soil structure.

What **records** need to be kept when treating plant pests, diseases and disorders?

Records may include name of operator, treatments applied, rate, date, settings of equipment, plant pest's numbers, numbers of beneficial organisms.

For more information on contexts, environment and variables for training and assessment, refer to the Sector Booklet.

Unit Sector(s)

Not applicable.