



Australian Government

Department of Education, Employment and Workplace Relations

AHCPMG601A Develop a plant pest survey strategy

Release: 1

AHCPMG601A Develop a plant pest survey strategy

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers developing a plant pest survey strategy and specifies the outcomes required to develop a strategy for plant pest surveys. It specifies elements for determining the presence, distribution and/or prevalence of a plant pest or for confirming that the pest is not detectable. This work may be conducted as part of an emergency response to an incursion or as part of routine surveillance, and will be conducted in line with established standards and protocols.
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Application of the Unit

Application of the unit	This unit applies to personnel who have been appointed or engaged to undertake a role within a plant pest incursion. This unit may also apply to personnel involved with planning responses to emergency animal diseases and aquatic animal diseases.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
1. Obtain and analyse biological information for survey design	1.1. Biological and dispersal characteristics of pest are identified. 1.2. Impact of climate on reproduction rate and predicted distribution of pest are determined. 1.3. Geographical distribution of the host(s) is identified. 1.4. Information is analysed to determine priority areas to be surveyed.
2. Develop survey methodology	2.1. Particular type of survey to be designed is determined according to phase of incursion. 2.2. Appropriate biometric design that will satisfy confidence limits is selected in consultation with technical experts and according to relevant standards and protocols. 2.3. Field data collection methodology is determined. 2.4. Quality assurance standards that will apply to survey are identified and incorporated in survey methodology and documentation. 2.5. Appropriate diagnostic tests are selected for use in confirming pest presence in samples to be collected. 2.6. Instructions for survey teams are developed.
3. Determine the resources required	3.1. Resources required for survey activities are determined in conjunction with technical experts and are documented.
4. Obtain approval for the survey design	4.1. Survey design is documented according to protocols and standards. 4.2. Survey design is submitted to appropriate authorities for approval.
5. Determine post-survey review processes	5.1. Review processes are determined to evaluate conduct and effectiveness of survey program.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- high level interpretation of information to determine distribution of pests in relation

REQUIRED SKILLS AND KNOWLEDGE

to biology, climate and vegetation

- working with other technical experts
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- detailed knowledge of a range of biological survey methods
- detailed knowledge of application of biometric principles to biological survey design
- detailed knowledge of biology of groups of pests and pathogens relevant to survey
- detailed knowledge of types and distribution of hosts relevant to survey
- knowledge of plant and animal industries and potential impact of incursions
- legislation and regulations defining and affecting management of incursions
- Australian Emergency Plant Pest Response Plan (PLANTPLAN).

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	The critical requirements for this unit of competency as a whole are listed below: assessment must confirm one's ability to develop and document a plant pest survey strategy according to prevailing standards and protocols.
Context of and specific resources for assessment	For valid assessment, one must have opportunities to participate in exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge required to develop a plant pest survey strategy. The candidate must also have access to a functioning control centre, or a control centre established for a plant pest response simulation exercise.
Method of assessment	Assessment for this unit of competency is to be largely practical in nature and will most appropriately be assessed in an emergency disease or plant pest response simulation exercise or in responses to an emergency disease or plant pest incursion.
Guidance information for assessment	To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities. The skills and knowledge required to plan and oversee an emergency disease or plant pest control program must be transferable to a range of work environments and contexts, including the ability to deal with unplanned events. For example, this could include work within control centres established for other emergency diseases or plant pest incursions.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

Biological and dispersal characteristics may include:	• intrinsic characteristics of pest • active flight • soil borne • water borne • wind borne • biological (mechanical) vectors that carry the pest such as: • fruit, seed and plant material • insects, invertebrates and vertebrates • non-biological means such as equipment, machinery, vehicles and clothing.
Types of survey required may include:	• area free • delimiting • distribution • prevalence.
Standards and protocols that may apply include:	• PLANTPLAN • Australian Veterinary Emergency Plan (AUSVETPLAN) • commonwealth, state and territory legislation defining legal powers in a disease emergency • damage minimisation policies • environmental policies • occupational health and safety requirements and policies • pest free area guidelines • standard operating procedures.
Diagnostic tests selected may include:	• biochemical tests • Enzyme-Linked Immunosorbent Assay (ELISA) • microscopy • Polymerase Chain Reaction (PCR).
Instructions for survey teams may cover:	• actions to take when suspect material is found • biosecurity measures for team and property owners • communication protocols for teams when briefing property owners, including confidentiality requirements • farm, district and regional requirements

RANGE STATEMENT	
	• sampling intensity • sampling protocols • specifying survey sites.
Resources required may include:	• equipment • illustrated guides • information technology and communications equipment • maps - topographical and aerial • personnel and their needs, including physical needs such as transport, accommodation and other requirements such as supervision and training • vehicles appropriate to area, site and terrain, including: • four-wheel drive • all terrain vehicle (ATV) • forklift • helicopter.
Technical experts to consult may include:	• those with appropriate diagnostic and biometric expertise.
Appropriate authorities may include:	• chief plant health manager • consultative committee on emergency plant pests • planning manager • survey manager.

Unit Sector(s)

Unit sector	Pest management
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Co-requisite units

Co-requisite units	

Co-requisite units		

Competency field

Competency field	
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