



Australian Government

Department of Education, Employment and Workplace Relations

SFIAQUA222A Control diseases

Release: 1

SFIAQUA222A Control diseases

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	<p>This unit of competency involves assisting with the control of diseases that might threaten cultured or held stock. It includes reporting on actual and potential problems and assisting with the treatment of disease outbreaks.</p> <p>Licensing, legislative, regulatory or certification requirements may apply to this unit. Therefore it will be necessary to check with the relevant state or territory regulators for current licensing, legislative or regulatory requirements before undertaking this unit.</p>
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Application of the Unit

Application of the unit	<p>Licences may be required to apply chemicals and treatments.</p> <p>All enterprise or workplace procedures and activities are carried out according to <i>relevant government regulations, licensing and other compliance requirements</i>, including <i>occupational health and safety (OHS) guidelines</i> and <i>ecologically sustainable development (ESD) principles</i>.</p> <p>Appropriate <i>personal protective equipment (PPE)</i> is selected, checked, used and maintained.</p>
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		

Employability Skills Information

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

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare <i>disease control and treatment</i>	<p>1.1. Problem species and their <i>behavioural traits</i> that have <i>potential effects on cultured or held stock</i> are recognised.</p> <p>1.2. Behaviour and intensity of disease organisms, including any abnormal behaviour in stock, are observed and reported to supervisor.</p> <p>1.3. Instructions on preparations for control and treatment are received from supervisor, confirmed and carried out as directed.</p>
2. Assist with disease control	<p>2.1. Assistance with preparation of disease treatments is provided, as directed by supervisor, including procedures for handling chemicals.</p> <p>2.2. Disease treatments are applied to affected stock as directed.</p> <p>2.3. Immediate and ongoing observations of treated stock are reported to supervisor.</p>
3. Assist with disposal of wastes and mortalities	<p>3.1. Collection equipment and holding/storage facilities are checked and prepared.</p> <p>3.2. <i>Wastes</i> and <i>mortalities</i> are collected and transferred to holding or storage facilities and <i>disposed of</i> safely.</p> <p>3.3. Work practices are employed to minimise stock stress or damage.</p>
4. Complete post-disease control activities	<p>4.1. Clean up of work area, including repairs and storage of equipment, is supervised and condition report prepared.</p> <p>4.2. Relevant disease control data, observations or information are recorded legibly and accurately, and any out of range or unusual records checked.</p> <p>4.3. Compliance and other required reports are prepared and conveyed to senior personnel advising of the effectiveness of disease control, and recommendations made for improvements.</p> <p>4.4. Feedback on own work performance is sought from supervisor and opportunities to improve identified.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- communicating ideas on possible improvements
- communicating with supervisor on work instructions for control activities
- operating, repairing and maintaining disease control structures and treatment equipment
- providing oral reports to the supervisor on effectiveness of controls
- recognising normal and gross abnormal stock behaviour
- undertaking disease treatment.

Literacy skills used for:

- recording disease information.

Numeracy skills used for:

- counting disease organisms or affected stock
- reporting mortalities.

Required knowledge

- gross signs/symptoms of common diseases of cultured or held stock
- disease control structures and treatment equipment options
- hygiene risks associated with diseases (zoonoses)
- normal behaviour of stock
- OHS requirements relating to controlling diseases
- potential effects on cultured or held stock
- safe use of chemicals
- work procedures for various tasks associated with controlling diseases.

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 evidence required to demonstrate competence in this unit	<p>Assessment must confirm ability to:</p> <ul style="list-style-type: none"> • assist with the control and treatment of disease • recognise and report actual and potential disease problems. <p>Assessment must confirm knowledge of:</p> <ul style="list-style-type: none"> • behavioural traits of problem species • techniques for disease control.
Context of and specific resources for assessment	<p>Assessment is to be conducted at the workplace or in a simulated work environment and should cover the range of diseases typically found in the region.</p> <p>Resources may include:</p> <ul style="list-style-type: none"> • culture or holding structures with/in water containing stock and threatened by actual and/or potential disease • data sheet for recording observations and actions • work procedures for treatment and control of diseases • treatments and equipment for treating/preventing diseases.
Method of assessment	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> • demonstration • practical exercises • project work • written or oral short-answer testing.
Guidance information for assessment	This unit may be assessed holistically with other units within a qualification.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Relevant government regulations, licensing and other compliance requirements</i> may include:</p>	<ul style="list-style-type: none"> • biodiversity and genetically modified organisms • biosecurity, translocation and quarantine • Australian Quarantine Inspection Service (AQIS) Export Control (Fish) orders and other import requirements • business or workplace operations, policies and practices • ESD principles, environmental hazard identification, risk assessment and control • fisheries or aquaculture regulations, permits and licences • health and welfare of aquatic animals • Indigenous land rights and cultural activities, including fishing by traditional methods • OHS hazard identification, risk assessment and control.
<p><i>OHS guidelines</i> may include:</p>	<ul style="list-style-type: none"> • appropriate workplace provision of first aid kits and fire extinguishers • codes of practice, regulations and/or guidance notes which may apply in a jurisdiction or industry sector • enterprise-specific OHS procedures, policies or standards • hazard and risk assessment of workplace, maintenance activities and control measures • induction or training of staff, contractors and visitors in relevant OHS procedures and/or requirements to allow them to carry out their duties in a safe manner • OHS training register • safe lifting, carrying and handling techniques, including manual handling, and the handling and storage of hazardous substances • safe systems and procedures for outdoor work,

RANGE STATEMENT	
	<p>including protection from solar radiation, fall protection, confined space entry and the protection of people in the workplace</p> <ul style="list-style-type: none"> • systems and procedures for the safe maintenance of property, machinery and equipment, including hydraulics and exposed moving parts • the appropriate use, maintenance and storage of PPE.
ESD principles may include:	<ul style="list-style-type: none"> • applying animal welfare ethics and procedures • control of effluents, chemical residues, contaminants, wastes and pollution • control of weeds, pests, predators and diseases, and stock health maintenance • improving energy efficiency • increasing use of renewable, recyclable and recoverable resources • maintaining biodiversity by sustainable fisheries or broodstock/seedstock collection • minimising noise, dust, light or odour emissions • preventing live cultured or held organisms from escaping into environment • reducing emissions of greenhouse gases • reducing energy use • reducing interactions with native and protected flora and fauna, marine or land parks or areas • reducing use of non-renewable resources • undertaking environmental hazard identification, risk assessment and control • undertaking facility quarantine, biosecurity and translocation of livestock and genetic material • using and recycling water, and maintaining water quality
PPE may include:	<ul style="list-style-type: none"> • buoyancy vest or personal floatation device (PFD) • gloves, mitts or gauntlets, and protective hand and arm covering • hard hat and protective head covering • hearing protection (e.g. ear plugs and ear muffs) • non-slip and waterproof boots (gumboots) or

RANGE STATEMENT	
	<p>other safety footwear</p> <ul style="list-style-type: none"> • personal locator beacon or Emergency Position Indicating Radio Beacon (EPIRB) • protective eyewear, glasses and face mask • protective outdoor clothing for tropical conditions • respirator or face mask • safety harness • sun protection (e.g. sun hat, sunscreen and sunglasses) • uniforms or overalls • waterproof clothing (e.g. wet weather gear and waders).
<i>Disease</i> may include:	<ul style="list-style-type: none"> • causes of impairment of health or a condition resulting in abnormal functioning of cultured or held stock • environmental causes, such as poor water quality or contaminants (e.g. chemicals) • nutritional (e.g. feed contaminants, quality and quantity) • viruses, protozoans, bacteria, fungi, worms, parasites, toxins of biological origin (e.g. toxic algae).
<i>Control and treatment</i> may include:	<ul style="list-style-type: none"> • appropriate nutritional program and additional vitamins • biological control (e.g. cleaner fish) • chemical barriers (e.g. foot baths) • deprivation or purging • disinfection of equipment • freshwater, saltwater or chemical baths • filtration, ozonation or water treatment • medication in food • probiotics and other chemicals (e.g. pesticides, herbicides and algacides) • prophylactic treatments of probiotics • provide cover, hides, shelters and habitat • reduce stress • replace susceptible species/variety with resistant species/variety • vaccination or inoculation: <ul style="list-style-type: none"> • medicated feeds • syringes, drippers and other application

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	equipment <ul style="list-style-type: none"> • water quality optimisation.
<i>Behavioural traits</i> may include:	<ul style="list-style-type: none"> • entry and exit into cultured or holding structures • infection pathways • seasonal activity • size or age of stock affected.
<i>Potential effects</i> may include:	<ul style="list-style-type: none"> • increased stress • mortalities • reduced breeding • reduced feeding • reduced growth rates • transfer of disease or pathogens.
<i>Cultured or held stock</i> may include:	<ul style="list-style-type: none"> • adults, broodstock (ready to breed), seedstock or stockers, eggs and sperm, fertilised eggs, larvae, post-larvae, seed, spat, hatchlings, yearlings, juveniles, fry, fingerlings, yearlings, smolt, sporophytes, seedlings and tissue cultures • finfish, crustaceans, molluscs, aquatic reptiles, amphibians, polychaete and oligochaete worms, plankton, micro-algae, seaweed, aquatic plants, live rock, sponges and other aquatic invertebrates • for human consumption (seafood), stockers for other farms, stockers for conservation or recreational fishing, display or companion animals (ornamentals), and other products, including pearls, skins, shells, eggs, chemicals and pigments • wild caught, hatchery or nursery reared.
<i>Wastes</i> may include:	<ul style="list-style-type: none"> • biohazard wastes (e.g. moribund animals, hormones and chemicals) • from control or treatment activities • nutrient-rich water and sediments • uneaten food and settled solids.
<i>Mortalities</i> may include:	<ul style="list-style-type: none"> • cultured or held stock • diseases and other organisms.
<i>Disposed of</i> may mean :	<ul style="list-style-type: none"> • as a biohazard • loose or packaged • off site

RANGE STATEMENT

	• on site.
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Unit Sector(s)

Unit sector	Aquaculture operations
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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