



Australian Government

Department of Education, Employment and Workplace Relations

SFIAQUA505C Plan stock health management

Release: 1

SFIAQUA505C Plan stock health management

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	<p>This unit of competency involves planning for stock health management, including developing and communicating enterprise procedures for managing and monitoring stock health and welfare.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
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Application of the Unit

Application of the unit	<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, food safety and hygiene regulations and procedures</i>, and <i>ecologically sustainable development (ESD) principles</i>.</p> <p>Equipment operation, maintenance, repairs and calibrations are undertaken in a safe manner that conforms to manufacturer instructions. 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		

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. Develop a stock health management program	1.1. Stock health issues are identified from published data, historical records and industry consultation. 1.2. Management options are defined relative to desired quality, quantity and productivity requirements of marketing and production plans. 1.3. Health plan is developed which defines enterprise procedures and specific responsibilities of operational elements to achieve required outcomes. 1.4. Plan is communicated effectively and systems are established to assess if required outcomes are achieved. 1.5. Mechanisation or automation of process or activity, including the use of specialised contract services, is researched and introduced.
2. Develop a stock monitoring program	2.1. The production, marketing, seasonal and environmental influences on stock health issues are identified and taken into account when selecting monitoring methods . 2.2. Monitoring plan defines procedures and specific responsibilities of operational elements to achieve required outcomes. 2.3. Plan is communicated effectively and systems are established to assess if required outcomes are achieved. 2.4. Professional assistance is sought where appropriate.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills
<ul style="list-style-type: none"> • communicating with work teams and management • consulting with industry health specialists • organising systems to support health plan • planning • researching stock health issues, options for mechanisation or automation and

REQUIRED SKILLS AND KNOWLEDGE

specialised services

- undertaking a health analysis on stock
- using a microscope to identify pathogens and diseases and monitor water quality.

Literacy skills used for:

- documenting health plan and writing procedures
- monitoring literature (written or electronic), regulations and economic data.

Numeracy skills used for:

- calculating cost-benefit of various treatment/prevention options
- interpreting monitoring data.

Required knowledge

- management of environmental (non-pathogenic) diseases
- management of pests, predators and diseases
- mechanisation or automation of process or activity
- strategic aspects of managing stock health
- planning treatment strategies
- plant and animal physiology
- use of specialised contract services.

Evidence Guide

EVIDENCE GUIDE	
<p>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.</p>	
Overview of assessment	
Critical aspects for assessment evidence required to demonstrate competence in this unit	<p>Assessment must confirm the ability to:</p> <ul style="list-style-type: none"> • develop, advise and monitor stock health management plans • identify issues and activities critical to the management and monitoring of stock health and to develop enterprise procedures which provide clear direction for employees involved in such activities • identify common disease/parasite organisms • make appropriate informed decisions. <p>Assessment must confirm knowledge of:</p> <ul style="list-style-type: none"> • economic aspects of aquacultural activities • external influences on stock health programs, such as legislation and consumer acceptance • stock health requirements • stock pathology.
Context of and specific resources for assessment	<p>Assessment is to be conducted at the workplace or in a simulated work environment.</p> <p>Resources may include:</p> <ul style="list-style-type: none"> • pathogen specimen laboratory.
Method of assessment	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> • project (work or scenario based) • scenarios or case studies • written or oral short-answer questions.
Guidance information for assessment	<p>This unit may be assessed holistically with other units within a qualification.</p>

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.

Relevant government regulations, licensing and other compliance requirements may include:

- business or workplace operations, policies and practices:
 - commercial law, including fair trading and trade practices
 - consumer law
 - corporate law, including registration, licensing and financial reporting
 - disability policies and practices
 - equal opportunity, anti-discrimination and sexual harassment
 - industrial relations and awards, individual employment contracts and share of catch agreements
 - jurisdictional variations
 - superannuation
 - taxation
 - trade practices
 - warnings and dismissals
 - worker's compensation
- ESD principles, environmental hazard identification, risk assessment and control
- fisheries or aquaculture regulations, permits, licences, quotas, catch restrictions and other compliance requirements, including:
 - Australian Exclusive Economic Zone
 - international treaties and agreements
- food safety, Hazard Analysis Critical Control Point (HACCP), hygiene and temperature control along chain of custody
- imports quarantine and inspection, and importing approved arrangements for Australian Quarantine Inspection Service (AQIS), Australian Customs Service (ACS) and Biosecurity Australia (BA)

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- Indigenous native title, land claims and cultural activities, including fishing by traditional methods
- maritime and occupational diving operations:
 - foreign and Australian legislation applying to quarantine and customs
 - International Convention for the Safety of Life at Sea (SOLAS)
 - International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW 1978)
 - Marine Emergency Response Search and Rescue (MERSAR)
 - National Standards for Commercial Vessels
 - pollution prevention - International Convention for the Prevention of Pollution from Ships (MARPOL 73/78)
 - Uniform Shipping Laws (USL) Code
 - use of vessels, right of way and other marine orders, bunkering and refuelling
- land, buildings and vehicles:
 - buildings and structures design and appearance, constructions and additions
 - poaching, trespass and theft
 - road laws for use of motor vehicles, bikes, trucks and other transport equipment
 - soil and water management
 - use of chemicals and biological agents
 - use of firearms and powerheads
 - use of utilities, including water, natural gas, electricity and sewage
 - water or land lease, tenure or ownership and use
- OHS hazard identification, risk assessment and control
- product quality assurance:
 - correct naming and labelling (e.g. country of origin, Australian Fish Names Standard and eco-labelling)
 - correct quantities, sizes and other customer requirements

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	<ul style="list-style-type: none"> • third-party certification (e.g. Australian Grown and ISO 14001:2004 Environmental management systems).
<i>OHS guidelines</i> may include:	<ul style="list-style-type: none"> • appropriate workplace provision of first aid kits and fire extinguishers • clean, uncluttered, hygienic workplace • 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, including protection from solar radiation, fall protection, confined space entry and the protection of people in the workplace • 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.
<i>Food safety and hygiene regulations and procedures</i> may include:	<ul style="list-style-type: none"> • Australian Shellfish Sanitation program • display, packaging and sale of food, including seafood and aquatic products • equipment design, use, cleaning and maintenance • exporting requirements, including AQIS Export Control (Fish) orders • handling and disposal of condemned or recalled seafood products • HACCP, food safety program, and other risk minimisation and quality assurance systems • location, construction and servicing of seafood

RANGE STATEMENT	
	<p>premises</p> <ul style="list-style-type: none"> • people, product and place hygiene and sanitation requirements • Primary Products Standard and the Australian Seafood Standard (voluntary) • processing, further processing and preparation of food, including seafood and aquatic products • product labelling, tracing and recall • receipt, storage and transportation of food, including seafood and aquatic products • requirements set out in Australian and New Zealand Food Authority (ANZFA) Food Standards Code and state and territory food regulations • temperature and contamination control along chain of custody.
<i>ESD principles</i> may include:	<ul style="list-style-type: none"> • controlling use and recycling of water, and managing water quality and quantity • increasing use of renewable, recyclable and recoverable resources • managing environmental hazard identification, risk assessment and control • managing imported products quarantine and inspection, facility biosecurity, translocation of livestock and genetic material, and health certification • managing stock health and welfare, especially for handling, holding, transport and slaughter • managing sustainable fisheries or broodstock/seedstock collection requirements, such as size limits, quotas, season restrictions, population dynamics, fishing impacts, reducing by-catch, fisheries management strategies and maintaining biodiversity • managing, controlling and treating effluents, chemical residues, contaminants, wastes and pollution • minimising noise, dust, light or odour emissions • planning environmental and resource efficiency improvements • preventing genetically modified and live cultured or held organisms from escaping into

RANGE STATEMENT	
	<p>environment</p> <ul style="list-style-type: none"> • protecting native and protected flora and fauna, marine or land parks or areas, adhering to the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), the Ramsar Convention, World Heritage and other international treaties for which Australia is a signatory • reducing emissions of greenhouse gases • reducing use of non-renewable resources • reducing disturbances to soils, erosion and surface water flows from machinery use and other activities • reducing energy use and introducing alternative energy sources.
<i>PPE</i> 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 or protective head covering • hearing protection (e.g. ear plugs and ear muffs) • insulated protective clothing for freezers or chillers and refrigeration units • non-slip and waterproof boots (gumboots) or other safety footwear • personal locator beacon or Emergency Position Indicating Radio Beacon (EPIRB) • protective eyewear, glasses and face mask • protective hair, beard and boot covers • protective outdoor clothing for tropical conditions • respirator or face mask • safety harness • sun protection (e.g. sun hat, sunscreen and sunglasses) • uniforms, overalls or protective clothing (e.g. mesh and waterproof aprons) • waterproof clothing (e.g. wet weather gear and waders).
<i>Stock health issues</i> may include:	<ul style="list-style-type: none"> • bacteria • fungi

RANGE STATEMENT	
	<ul style="list-style-type: none"> • other pathogens • parasites (endo and ecto) • pest or competitor organisms • pollutants or contaminants • predators • symbionts • viruses • worms (e.g. polychaetes and nemertean).
Management options may include:	<ul style="list-style-type: none"> • barrier control (e.g. quarantine and disinfection) • bath treatments (e.g. chemicals or freshwater/saltwater) • biological control (e.g. cleaner fish) and probiotics • cannibalism • cleaning of culture or stock holding structures • cull stock • environmental or water quality manipulation • injections (e.g. therapeutics and vaccines) • nutrition and feeding hierarchy • oral treatment (e.g. therapeutics) • pest, pathogen or predator exclusion (e.g. filters, UV and ozone) • provision of shelter or hides • regular grading • resistant phase/species • shelter, cover and hides • stocking densities • stress • water.
Monitoring methods may include:	<ul style="list-style-type: none"> • behaviour (visual), such as swimming (finfish), feeding, crawling (crustaceans) and gaping (molluscs) • feeding activity and feed conversion ratio (FCR) • laboratory (e.g. gill smears and blood parameters) • mortalities • physical external or internal appearance • weight gain or loss.

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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