



Australian Government

Department of Education, Employment and Workplace Relations

SFIAQUA309C Oversee harvest and post-harvest activities

Release: 1

SFIAQUA309C Oversee harvest and post-harvest activities

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	<p>This unit of competency involves overseeing the harvesting of <i>cultured or held stock, basic post-harvest activities</i> and transportation off the facility. It covers conveying information, selecting equipment and method of operation, monitoring stock being harvested and, where required, some post-harvest operations.</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>This unit has application for harvest and post-harvest activities only. Processing activities, such as cooking, gill gutting, scaling, filleting, shucking, peeling or heading are covered in seafood processing units.</p> <p>The humane killing or slaughter of livestock is covered by RTE3134A Slaughter livestock. The preparation and packing of livestock for off-facility transport is covered by SFISTOR204A Prepare, pack and dispatch stock for live transport. Coordination of staff is covered by RTE3704A Coordinate worksite activities.</p> <p>Licences may be required if:</p> <ul style="list-style-type: none"> • using firearms • operating forklifts • diving • driving vehicles • operating vessels. <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</p>
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	maintained.
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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. Plan and organise for basic harvest and post-harvest activities	1.1. Harvest specifications are interpreted and confirmed with senior personnel. 1.2. Availability of suitable stock for harvest is confirmed. 1.3. Resource requirements for harvest are determined and arranged. 1.4. Risk factors which could affect the quality of stock during harvest are identified and plans made to minimise risk. 1.5. Equipment is checked for availability and serviceability and repaired. 1.6. Stock transport and holding arrangements are confirmed with operators.
2. Undertake harvest	2.1. Equipment is positioned, calibrated and operated. 2.2. Harvesting activities are monitored to ensure consistency with harvest specifications and minimal stock stress or damage. 2.3. Harvest quantity, quality and size are confirmed and records prepared. 2.4. Harvested stock is confirmed as complying with customer quality specifications .
3. Undertake on-farm post-harvest activities	3.1. On-farm post-harvest activities are monitored to ensure consistency with harvest specifications. 3.2. Transport (off-farm) of dead or live stock is arranged and packing monitored to ensure minimal stock stress or damage. 3.3. Labels and documentation are prepared and attached to transport containers according to client specifications. 3.4. Containers for pick-up are checked and counted. 3.5. Shipment is collected and shipment report given to senior personnel. 3.6. Storage facilities for product are maintained.
4. Supervise follow-up activities and review operations	4.1. Clean up of work area, including repairs and storage of equipment, is supervised and condition report prepared. 4.2. Relevant harvest and post-harvest data, observations or information are recorded legibly and accurately, and any out of range or unusual records checked. 4.3. Compliance and other required reports are prepared

ELEMENT	PERFORMANCE CRITERIA
	<p>and conveyed to senior personnel advising of the effectiveness of harvest and post-harvest, and recommendations made for improvements.</p> <p>4.4. Options for improving efficiency through mechanisation or automation of process or activity, and use of specialised contract staff are researched and presented to senior personnel as potential improvements.</p> <p>4.5. Staff are given feedback on their work performance.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- communicating with senior personnel on harvest specifications, labour and resource requirements
- coordinating harvest, post-harvest and transport activities, and staff
- providing feedback to staff on performance
- providing relevant paperwork for transport operators
- recognising normal and abnormal stock behaviour and risky or changing environmental conditions
- reporting orally and in writing on harvest and post-harvest to senior personnel
- researching options for improvement.

Literacy skills used for:

- interpreting a harvest schedule
- preparing relevant paperwork for transport operators
- researching mechanisation or automation options
- writing reports to senior personnel on harvesting operation, including post-harvesting irregularities.

Numeracy skills used for:

- calculating size, grades, ranges and averages
- counting stock and containers
- recording harvest and post-harvest data.

REQUIRED SKILLS AND KNOWLEDGE**Required knowledge**

- biological and water quality requirements for stock being handled, processed and transported
- harvest and post-harvest equipment options and limitations, including options for mechanisation or automation of process, and services provided by specialised contract services
- harvesting and post-harvest principles and practices for specific stock types and culture or holding structures
- safety considerations and hazards associated with harvest and post harvest activities
- services provided by specialised contract services
- quality assurance practices in stock harvesting, grading, post-harvest and transport
- relevant ESD principles particularly humane slaughter methods.

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"> • coordinate the harvest of stock and post-harvest activities, including <ul style="list-style-type: none"> • sorting and grading • holding and removal from water/holding facility • on-farm transport • monitor and test quality • monitor holding conditions • monitor storage conditions. <p>Assessment must confirm knowledge of:</p> <ul style="list-style-type: none"> • harvest and post-harvest principles and practices • OHS standards consistent with harvest schedule and operational guidelines • risks and mitigation procedures.
Context of and specific resources for assessment	<p>Assessment is to be conducted at the workplace while harvest and post-harvest activities are underway or in a simulated environment.</p> <p>Resources may include:</p> <ul style="list-style-type: none"> • harvest specification or schedule • staff to coordinate • stock to harvest.
Method of assessment	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> • demonstration • practical exercises • written or oral short-answer testing.
Guidance information for assessment	<p>This unit may be assessed holistically with RTE3704A Coordinate worksite activities, and 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.

Cultured or held stock may include:

- 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.

Basic post-harvest activities may include:

- anaesthesia or sedation
- cool room storage
- depuration or shellfish sanitation
- dips, drips and sprays
- icing, chilling, ice slurry or refrigeration
- meeting quarantine or biosecurity requirements
- on-facility transport of livestock or product
- packing
- preparation for off-facility transport of dead stock or product
- purging or holding (live)
- sorting, grading or removing half pearls from molluscs

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	<ul style="list-style-type: none"> washing, cleaning and hydrating.
<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 business or workplace operations, policies and practices correct marketing names and labelling environmental hazard identification, risk assessment and control food safety/Hazard Analysis Critical Control Point (HACCP), hygiene and temperature control along chain of custody, and Australian Quarantine Inspection Service (AQIS) Export Control (Fish) orders health and welfare of aquatic animals maritime operations, safety at sea and pollution control 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, 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

RANGE STATEMENT	
	<p>moving parts</p> <ul style="list-style-type: none"> the appropriate use, maintenance and storage of PPE.
<p><i>Food safety and hygiene regulations and procedures</i> may include:</p>	<ul style="list-style-type: none"> Australian Shellfish Sanitation program equipment design, use, cleaning and maintenance exporting requirements, including AQIS Export Control (Fish) orders HACCP, food safety program, and other risk minimisation and quality assurance systems location, construction and servicing of seafood premises people, product and place hygiene and sanitation requirements Primary Products Standard and the Australian Seafood Standard (voluntary) 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.
<p><i>ESD principles</i> may include:</p>	<ul style="list-style-type: none"> adhering to protected areas, marine or land parks 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 adhering to translocation of livestock and genetic material, and health certification applying animal welfare ethics for handling, holding and slaughter appropriate disposal of waste feeds, mortalities and other dead biological matter facility quarantine, biosecurity and control of weeds, pests, predators and diseases genetically modified organisms, biodiversity and conservation Acts implications on biodiversity and protecting

RANGE STATEMENT	
	<p>native and protected species</p> <ul style="list-style-type: none"> • imports quarantine and inspection, and approved arrangements for AQIS, Australian Customs Service (ACS) and Biosecurity Australia (BA) • managing, controlling and treating effluent waste and reducing contaminants • minimising noise and exhaust or odour emissions • minimising the unsafe use and disposal of maintenance debris, such as oil containers and chemical residues, and hazardous substances, such as fuel and oils • monitoring and controlling biological oxygen demand (BOD) of effluent water • reducing damage to native vegetation and animals • reducing dust problems, soil disturbance and increased run-off flows from machinery use and unsafe cleaning and servicing activities • reducing live cultured or held organisms from escaping into environment • refuelling and bunkering, and control of pollution at sea • sustainable fisheries requirements, such as size limits, quotas, season restrictions, population dynamics, fishing impacts and fisheries management strategies • using and recycling water, and reducing energy use.
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 • hearing protection (e.g. ear plugs and ear muffs) • hard hat or protective head covering • 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)

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	<ul style="list-style-type: none"> • 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) • waterproof clothing (e.g. wet weather gear and waders).
<i>Harvest specifications</i> may include:	<ul style="list-style-type: none"> • acceptable quality specifications • culture or holding structures to be harvested • destination of harvested stock • harvesting objectives: <ul style="list-style-type: none"> • gathering stock • cleaning, moving and handling stock • holding stock • sorting and grading stock • period over which harvest is to occur • pre-harvest conditioning of stock (e.g. starvation and purging) • quantities to be harvested • slaughter procedures • temperature requirements (e.g. ice and slurries) • timing of harvest • written or verbal.
<i>Resource requirements</i> may include:	<ul style="list-style-type: none"> • boxes and packing materials • depuration or purging facilities • half pearl harvesting equipment • harvesting equipment: <ul style="list-style-type: none"> • bait, attractants and foods • crowd nets and fish pumps or brails • dilly nets, drop nets, scoop nets, trawl/prawn nets, cast nets, gill nets, traps (e.g. bait and opera house traps) and wing nets • flow traps • handlines and fishing lines • hides (used with dip nets) • holding and on-farm transport equipment:

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	<ul style="list-style-type: none"> • bins • buckets • tanks • troughs • labour: <ul style="list-style-type: none"> • forklift operators • harvest workers • specialised equipment operators • transport operators • vessel operators • ice and coolants • slaughter and sedation/chilling equipment • vessels, vehicles, trucks and trailers.
Risk factors may include:	<ul style="list-style-type: none"> • adverse climatic conditions • equipment damage or breakdown • OHS • predator attack/damage • stock damage and mortalities • stock escape.
Quality specifications may include:	<ul style="list-style-type: none"> • body condition (e.g. fat content and meat yield) • general condition • live or dead • percentage acceptable • physical appearance, type and extent of external damage • parasites (present) or other health issues (e.g. mud worm, gill crustaceans and lice) • sex or maturation condition • shape or colour • size or weight • whole or processed.
Live stock may include:	<ul style="list-style-type: none"> • crustaceans • finfish • live-feeds or algae • molluscs • ornamentals.
Labels and documentation may include:	<ul style="list-style-type: none"> • destination details, including contact number • dispatching company details, including contact

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	and emergency numbers <ul style="list-style-type: none"> • farm, facility or lease number or details • transport company, including contact number • type of stock and grade, quality or size • warning labels (e.g. 'live seafood', 'keep cool' and 'fragile').
<i>Shipment report</i> may include:	<ul style="list-style-type: none"> • destination • quality and quantity of stock sent • special conditions or observations.
<i>Storage facilities</i> may include:	<ul style="list-style-type: none"> • aeration or oxygenation • dry (in air) • heating • humidity • refrigeration and chilling • snap and deep freeze • wet (in water).
<i>Condition report</i> may include:	<ul style="list-style-type: none"> • backup equipment availability • equipment problems • regular maintenance and repairs • repairer's contact numbers.

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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