



Australian Government

Department of Education, Employment and Workplace Relations

SFIAQUA408C Supervise harvest and post-harvest activities

Release: 1

SFIAQUA408C Supervise harvest and post-harvest activities

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit of competency involves preparing a harvest schedule and managing the harvest and post-harvest handling activities of cultured or held stock, including humane slaughter and quality assurance practices. It does not include processing activities, such as cooking, gill gutting, scaling, filleting, shucking, peeling or heading. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.
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Application of the Unit

Application of the unit	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 not covered. A person in this work role would work closely with supervisors of harvest labour and suppliers of services such as transport All enterprise or workplace procedures and activities are carried out according to relevant government regulations, licensing and other compliance requirements, including occupational health and safety (OHS) guidelines, food safety and hygiene regulations and procedures, and ecologically sustainable development (ESD) principles. Equipment operation, maintenance, repairs and calibrations are undertaken in a safe manner that conforms to manufacturer instructions. Appropriate personal protective equipment (PPE) is selected, checked, used and 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. Prepare harvest and post-harvest schedules	1.1. Direction is sought from marketing personnel on harvest requirements. 1.2. Numbers and stock quality parameters required by customer or production plan are identified. 1.3. Culture or holding structures or systems to be harvested are selected. 1.4. Timing and period of harvest are determined to meet customer or production plan requirements. 1.5. Harvest and on-farm post-harvest schedules are prepared and conveyed to team leaders. 1.6. Personnel availability, and their skills and qualifications, are confirmed and duty rosters (day/night) prepared. 1.7. Equipment and facilities are confirmed as available and serviceable. 1.8. Personnel responsible for transport, processing and marketing are briefed on arrangements. 1.9. Options for mechanisation or automation of process or activity are assessed, including the use of specialised contract services, and recommendations made to senior personnel. 1.10. Harvest and post-harvest activities are integrated with other activities. 1.11. Reporting procedures are clearly defined and staff informed.
2. Monitor progress of harvest and post-harvest activities	2.1. Stock are harvested and handled with minimal stress or damage and according to the harvest schedule. 2.2. Slaughtered stock are packed and transported to processing facilities. 2.3. Stock for live transport are packed and transported as required. 2.4. Quality assurance practices on harvested and slaughtered stock are maintained. 2.5. Treatment of product during transport and arrival at destination is monitored through the transport company and customer.
3. Finalise harvest and post-harvest activities	3.1. Clean up of work area, including repairs and storage of equipment, is supervised and condition report prepared. 3.2. Relevant harvest and post-harvest data, observations

ELEMENT	PERFORMANCE CRITERIA
	or information are recorded legibly and accurately, and any out of range or unusual records checked. 3.3. Production statistics are updated with harvest and post-harvest information. 3.4. Compliance and other required reports are prepared and conveyed to senior personnel advising of the effectiveness of harvest and post-harvest, and recommendations made for improvements 3.5. Staff are given feedback on their work performance.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- briefing of staff, supervisors and suppliers of services
- assessing options for mechanisation or automation of process or activity, including the use of specialised contract services
- developing harvest schedules
- identifying opportunities for improvements and innovations
- interpreting orders or sales and production
- organising skills to coordinate multiple work tasks, roster workers and responsibilities
- planning harvest and post-harvest activities
- providing feedback to staff, work team leaders and suppliers of services
- reporting orally in writing to senior management on harvest and post-harvest activities.

Literacy skills used for:

- filling out compliance-related forms
- reading market and production information, harvest and equipment reports
- recording harvest-related data in production records.

Numeracy skills used for:

- calculating averages, loads, and quantities
- calculating percentage survival and percentage quality parameters.

REQUIRED SKILLS AND KNOWLEDGE**Required knowledge**

- appropriate harvesting and post-harvesting techniques
- production cycle for specific types of stock
- quality control procedures relevant to harvesting, grading and storage of stock
- quality parameters in specific types of stock
- requirements and welfare of stock (live).

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	Assessment must confirm the ability to: - develop a harvest schedule and manage its implementation and post-harvest requirements. Assessment must confirm knowledge of: - harvesting techniques and post-harvest processes - quality assurance principles.
Context of and specific resources for assessment	Assessment is to be conducted at the workplace or in a simulated work environment. Resources may include: workplace or simulated workplace with actual harvest underway, including work team leader and staff.
Method of assessment	The following assessment method is suggested: project (work or scenario based).
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.

RANGE STATEMENT	
<i>Cultured or held stock</i> 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.
<i>Relevant government regulations, licensing and other compliance requirements</i> 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:

RANGE STATEMENT

- 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)
- 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

RANGE STATEMENT	
	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 • third-party certification (e.g. Australian Grown and ISO 14001:2004 Environmental management systems).
<i>OHS guidelines</i> may include:	• 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	• Australian Shellfish Sanitation program • display, packaging and sale of food, including seafood and aquatic products

RANGE STATEMENT	
include:	• 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 premises • 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.
ESD principles may include:	• 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

RANGE STATEMENT	
	- 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 environment - 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.
PPE may include:	- 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

RANGE STATEMENT	
	• 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 quality parameters</i> may include:	• alive or dead (slaughtered or killed) • behaviour (live stock) • body condition (e.g. fat content and meat yield) • percentage survival and percentage within specifications • other quality criteria according to customer requirements • physical appearance • sex or maturation status • shape or colour • size or weight grades • type and extent of damage.
<i>Culture or holding structures or systems</i> may include:	• blowers, aerators, paddlewheels and aspirators • greenhouses, hothouses and igloos • pest, predator and disease control structures • water supply and disposal or effluent systems, including pumps, pipes, canals, channels, settlement ponds and storage dams • cages, pontoons, enclosures and pens, including associated moorings, floats, anchors and markers • dams, ponds and pools • display tanks, aquaria and aquascapes • grow out facilities, hatcheries and nurseries • harvesting swimways, canals or channels • live holding tanks, bins, cages and pens • longlines, posts, racks and rails, rafts, fences, socks, trays, sticks, baskets, modules, barrels, bags and panels • open, flow-through, closed and semi-closed systems • purging or depurating systems • tanks, raceways and recirculating systems.
<i>Post-harvest</i> activities may include:	• anaesthesia or sedation • cool room storage

RANGE STATEMENT	
	• depuration or shellfish sanitation • dips, drips and sprays • humane slaughter • icing, chilling, ice slurry or refrigeration • meeting quarantine or biosecurity requirements • on-facility transport of livestock or product • packing • packing for live stock transport • packing for transport to processing plant • preparation for external live transport, including purging • preparation for off-facility transport of dead stock or product • purging or holding (live) • sorting, grading or removing half pearls from molluscs • washing, cleaning and hydrating.
Compliance reports may include information on:	• exotic species • notifiable diseases • production returns • protected species.
Production statistics may include:	• percentage survival • percentage other specifications • percentage of other quality parameters: • food conversion ratio • growth rate • meat yield • numbers produced or sold.

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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