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<th>Training Package</th>
<th>Rural Production (RTE03)</th>
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<tr>
<td>Title</td>
<td>Support horticultural crop harvesting</td>
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This competency standard covers the process of crop picking and related tasks such as routine assessment of crop readiness for harvest, basic sorting, bunching and grading, and transportation of the crop from the field. Work is likely to be under routine supervision with intermittent checking. Responsibility for some roles and co-ordination within a team may be required. Crop harvesting is usually carried out within established company procedures. Competency at this level is demonstrated by the application of knowledge and skills to a range of crop harvesting tasks and roles.

### Evidence Guide

**What evidence is required to demonstrate competence for this standard as a whole?**

Competence in supporting crop harvesting requires evidence that the trainee can perform routine assessment of plant products for harvest in accordance with enterprise market requirements, harvest a crop and transport it according to enterprise procedures and OHS requirements. The skills and knowledge required to support crop harvesting must be **transferable** to a different work environment. A person who can support the harvesting of a crop should be able to transfer that knowledge and skill to another workplace although different crops may be present. For example, if a crop is harvested on a property growing vegetables, it should be evident that a crop could be harvested on a property where flowers are grown, following induction to the new workplace.

### What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- recognition of the maturity parameters of a range of crops
- enterprise quality procedures and characteristics of a crop relative to varying market requirements
- grading characteristics of each crop
- the importance of maintaining quality of produce including cooling requirements and quick

### What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complimentary skills are required. These include the ability to:

- participate in teams and contribute to team objectives
- read and interpret work procedures
- communicate with team members and supervisor
- calculate tallies and production rates
- dispose of out-of-standard plant material in an environmentally aware and sensitive manner, such as the careful disposal of rotten produce to minimise

### Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

### Assessment guide

There is essential information about assessing this competency standard for consistent performance and where and how it may be assessed, in the Assessment Guidelines for this Training Package. All users of these competency standards must have access to the Assessment Guidelines. Further advice may also be sought from the relevant Sector Booklet.

### Key Terms and Concepts

- containers
- crop damage
- crop maturity
- crops
- enterprise market requirements
- enterprise work procedures
- equipment
- grading characteristics
- harvesting practices
- hazard identification
- machinery
- manual handling techniques
- occupational health and safety (OHS)
- personal protective equipment (PPE)
- plant damage minimisation
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| transport from field to processing areas  
• the effect of adverse climatic conditions (e.g., rain, hail, extreme wind with dust, or very high ultraviolet radiation), which may downgrade the quality of affected crop, prevent or impede harvest operations or severely influence the time taken to complete the harvest program. | smell and the spread of insect pests and disease. | | • pre-operational checks  
• quality of produce  
• reporting methods  
• risk assessment  
• safety checks  
• sorting and grading  
• Standard Operating Procedures (SOP)  
• storage temperature  
• temperature maintenance  
• tools, equipment and machinery  
• transportation |
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<tr>
<td>1.1</td>
<td>Crop maturity is determined according to supervisors instructions and enterprise work procedures.</td>
<td>The Range of Variables explains the context within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in particular training and assessment requirements may depend on the work situations available. For more information on contexts, environment and variables for training and assessment refer to the Sector Booklet. What types of crop may be harvested? Fruit, vegetable, flower, foliage and bulb crops may be included. How is the maturity of a crop determined? Maturity parameters may include size, weight, length, shape, colour, ripeness, texture, skin condition, ease of removal and moisture content. These characteristics may be measured by observation and maturity testing tools and equipment such as knives, sizing rings, colour charts, refractometers, and penetrometers and produce firmness testers. The results are interpreted and analysed by comparison with specification charts and enterprise and industry maturity standards. What enterprise work procedures may apply to this standard? Work procedures will be based on sound horticultural principles and practices and may include supervisors oral or written instructions, harvest program or production schedule, enterprise standard operating procedures (SOPs), specifications, routine maintenance schedules, work notes; manufacturers service specifications and operators manuals; waste disposal, recycling and re-use guidelines; and OHS procedures.</td>
<td>Learning experiences for the HSC must address: Signs of crop maturity including: - size - weight - length - shape - colour - ripeness - texture - skin condition - ease of removal - moisture content. Methods and procedures for the measurement of crop maturity including: - observation - knives - sizing rings - colour charts - refractometers - penetrometers - produce firmness testers - comparison charts - industry standards - enterprise standards.</td>
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<td>1.3</td>
<td>The crop selected for harvesting conforms to enterprise market requirements.</td>
<td>What types of crop may be harvested? Fruit, vegetable, flower, foliage and bulb crops may be included. What enterprise market requirements may influence the crop being harvested? Enterprise market requirements may include variety, size, weight, length, shape, colour, health and quality depending on seasonal and market forces.</td>
<td>Learning experiences for the HSC must address: An understanding of enterprise market requirements including: • variety • size • weight • length • shape • colour • health • quality.</td>
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<tr>
<td>2 Prepare equipment for harvesting</td>
<td>2.1 Tools, equipment and machinery appropriate to the task being undertaken are selected. What tools, equipment and machinery may be used to carry out crop harvesting procedures? Tools, equipment and machinery may include secateurs, knives, machetes, rubber bands, string, callipers or sizing rings, specification charts or aids, gloves, bags, ladders, tractors, trailers, forklifts, powered ladders, containers, buckets, dip tins and bins. What enterprise work procedures may apply to this standard? Work procedures will be based on sound horticultural principles and practices and may include supervisors oral or written instructions, harvest program or production schedule, enterprise standard operating procedures (SOPs), specifications, routine maintenance schedules, work notes; manufacturers service specifications and operators manuals; waste disposal, recycling and re-use guidelines; and OHS procedures.</td>
<td>Learning experiences for the HSC must address: An awareness of tools, equipment and machinery for harvesting including: • secateurs • knives • machetes • rubber bands • string • callipers or sizing rings • specification charts/aids • gloves • bags • ladders • tractors • trailers • containers • buckets • dip tins • bins.</td>
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<td>2.2</td>
<td>Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise work procedures.</td>
<td>Learning experiences for the HSC must address: An awareness of pre-operational checks for selected tools, equipment and machinery appropriate to the work task.</td>
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| 2.3     | OHS hazards are identified, risks assessed and reported to the supervisor. | What OHS hazards may be associated with harvesting a crop? Hazards may include solar radiation, noise, dust, pollen, pests, sharp hand tools and equipment, manual handling, ladders, slippery or uneven surfaces, potholes and moving machinery and vehicles. | Learning experiences for the HSC must address: An awareness of potential hazards including:  
- physical  
  - unsafe tools and equipment  
  - uneven surfaces  
  - fatigue  
  - noise  
  - dust  
  - vehicles  
  - exposed moving machinery parts  
  - obstacles  
- biological  
  - plant allergy  
  - hazardous substances  
  - insects  
  - spiders  
  - snakes  
- ergonomic  
  - inappropriate use of tools/equipment  
  - poor manual handling  
- environmental  
  - climate  
  - solar radiation  
- psychological  
  - dealing with emergencies  
  - working alone  
  - isolation.  
A basic understanding of risk assessment:  
- identify hazards  
- assess associated risks  
- strategies to control/eliminate risks. |
| 2.4     | Suitable personal protective equipment (PPE) is selected, used and maintained. | What personal protective equipment (PPE) may be required to support crop harvesting? Personal protective equipment may include boots, overalls, gloves, goggles, face mask, hearing protection, and sun hat and sunscreen lotion. | Learning experiences for the HSC must address: Selection and use of personal protective equipment (PPE) appropriate to the work task including:  
- boots  
- overalls  
- gloves  
- face masks  
- hearing protection  
- sun hat and sunscreen. |
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| 3       | Harvest the crop     |                   | Maintenance of PPE according to manufacturer’s instructions and enterprise SOP including:  
|         |                      |                   | • cleaning and decontamination  
| 3.1     | Harvesting practices employed minimise plant damage and reflect efficient use of time, resources and labour as per enterprise work procedures. | What harvesting practices may be employed to harvest a crop?  
|         |                      |                   | Harvesting practices may include correct use of equipment, select picking, reporting or recording tallies, removing out-of-type plants and removing rotten or immature fruit. Plant and crop damage may be minimised by wearing gloves, cutting fingernails, maintaining sharp tools, placing rather than dropping the crop into containers, observing fill heights or packing instructions for containers, and correctly stacking containers on transport.  
|         |                      |                   | What enterprise work procedures may apply to this standard?  
|         |                      |                   | Work procedures will be based on sound horticultural principles and practices and may include supervisors oral or written instructions, harvest program or production schedule, enterprise standard operating procedures (SOPs), specifications, routine maintenance schedules, work notes; manufacturers service specifications and operators manuals; waste disposal, recycling and re-use guidelines; and OHS procedures.  
| 3.2     | Harvesting the crop is undertaken according to OHS requirements. | What types of crop may be harvested?  
|         |                      |                   | Fruit, vegetable, flower, foliage and bulb crops may be included.  
|         |                      |                   | What OHS requirements may be relevant to this standard?  
|         |                      |                   | OHS requirements may include identifying hazards, assessing and reporting risks, cleaning, maintaining and storing tools, equipment and |

Learning experiences for the HSC must address:  
Harvesting practices including:  
• correct use of equipment  
• select picking  
• reporting and recording tallies  
• removing out-of-type plants  
• removing rotten or immature food.  
Plant damage minimisation practices including:  
• wearing gloves  
• cutting fingernails  
• maintaining sharp tools  
• placing rather than dropping the plant into containers  
• observing fill heights  
• observing packing instructions  
• correctly stacking containers for transport.  

Learning experiences for the HSC must address:  
An awareness of appropriate OHS strategies including:  
• select, use and maintain appropriate PPE  
• sufficient drinking water  
• basic first aid training  
• access to first aid kits  
• safe work practices and procedures.  

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<td>machinery; appropriate use of personal protective equipment including sun protection, drinking to avoid dehydration, safe operation of tools, equipment and machinery, correct manual handling, basic first aid, personal hygiene and reporting problems to supervisors.</td>
<td>• access to appropriate communication devices  • emergency plans  • safety signs  • environmental policies.</td>
</tr>
<tr>
<td>3.3</td>
<td>Basic <strong>sorting and grading</strong> of the crop is carried out according to enterprise work procedures.</td>
<td>What does <strong>sorting and grading</strong> of the crop involve? Sorting and grading may include removing out-of-type plants, or physically damaged, unhealthy, rotten or immature fruit and vegetables. The crop may be graded according to variety, size, length, colour, maturity, blemishes, bud count and quality, which are subject to seasonal and market forces. Crop in doubt is checked with the supervisor. Any out-of-standard produce should be disposed of according to enterprise policy. What <strong>enterprise work procedures</strong> may apply to this standard? Work procedures will be based on sound horticultural principles and practices and may include supervisors oral or written instructions, harvest program or production schedule, enterprise standard operating procedures (SOPs), specifications, routine maintenance schedules, work notes; manufacturers service specifications and operators manuals; waste disposal, recycling and re-use guidelines; and OHS procedures.</td>
<td><strong>Learning experiences for the HSC must address:</strong> Sorting crops including the removal of:  • out-of-type plants  • physically damaged produce  • unhealthy, rotten or immature produce. Grading crops according to:  • variety  • size  • length  • colour  • maturity  • blemishes  • bud count  • quality. Enterprise work procedures for:  • identification of grades applicable to crops according to seasonal and market forces  • identification of inferior produce  • disposal of unsuitable produce.</td>
</tr>
<tr>
<td>3.4</td>
<td>Harvesting tools, equipment and machinery are cleaned and maintained according to enterprise work procedures.</td>
<td>What <strong>tools, equipment and machinery</strong> may be used to carry out crop harvesting procedures? Tools, equipment and machinery may include secateurs, knives, machetes, rubber bands, string, callipers or sizing rings, specification charts or aids, gloves, bags, ladders, tractors, trailers, forklifts, powered ladders, containers, buckets, dip tins and bins.</td>
<td><strong>Learning experiences for the HSC must address:</strong> Maintenance of harvesting tools, equipment and machinery following the manufacturer’s specifications including:  • cleaning  • oiling  • replacement of faulty or malfunctioning equipment and components.</td>
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<tr>
<td>3.5</td>
<td>Problems are reported to the supervisor.</td>
<td>What problems may arise when harvesting a crop? Problems may include hazards, pests, tools, equipment and machinery, crop quality, other team members, climate or plant health.</td>
<td><strong>Learning experiences for the HSC must address:</strong> Problems including: - hazards - pests - problems with tools, equipment and machinery - crop quality - other team members - climate - plant health.</td>
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<td>4</td>
<td>Transport the crop</td>
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<td>4.1</td>
<td>Safe manual handling techniques are employed when handling containers.</td>
<td>What types of containers may be used in crop harvesting? Containers may include boxes, trays, crates, bulk bins or net bags.</td>
<td><strong>Learning experiences for the HSC must address:</strong> Containers including: - boxes - trays - crates - bulk bins - net bags. Safe manual handling techniques including: - lifting - carrying.</td>
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<tr>
<td>4.2</td>
<td>Containers are moved and stacked in such a way that minimises damage to the crop.</td>
<td></td>
<td><strong>Learning experiences for the HSC must address:</strong> Minimisation of damage during storage and transport including: - bruising - skin damage - rotting - aeration/ventilation - environmental conditions. Safe moving and stacking including: - use of trolley, trailer or tractor - number of levels when stacked - use of lids on containers.</td>
</tr>
<tr>
<td>4.3</td>
<td>Temperature of the crop is maintained at the levels set by industry and enterprise work procedures.</td>
<td>How is the temperature of a crop maintained in the field and upon delivery at the processing or storage area? Crops may need to be stored in the shade, in</td>
<td><strong>Learning experiences for the HSC must address:</strong> A basic understanding of the purpose and methods of temperature maintenance including: - shade</td>
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<tr>
<td>4.4</td>
<td>The crop is <strong>transported</strong> from the field to the processing or storage area.</td>
<td>water-filled or covered containers in the field. In the shed storage may occur in a temperature-controlled environment such as a cool room. These may include forced air cool rooms for table grapes, hydro cool rooms for stone fruit and vacuum cool rooms for mushrooms. What types of crop may be harvested? Fruit, vegetable, flower, foliage and bulb crops may be included. What <strong>enterprise work procedures</strong> may apply to this standard? Work procedures will be based on sound horticultural principles and practices and may include supervisors oral or written instructions, harvest program or production schedule, enterprise standard operating procedures (SOPs), specifications, routine maintenance schedules, work notes; manufacturers service specifications and operators manuals; waste disposal, recycling and re-use guidelines; and OHS procedures. How is the crop <strong>transported</strong> from the field to the processing area? Produce is picked into containers and transported by tractor, trailer, truck or forklift. Team members involved in the operation of vehicles should comply with operators manuals, and enterprise work and OHS procedures.</td>
<td>• water filled containers  • covered containers  • cool room  – forced air  – hydro  – vacuum.</td>
</tr>
<tr>
<td>4.5</td>
<td>Containers are maintained in good working order.</td>
<td>What types of <strong>containers</strong> may be used in crop harvesting? Containers may include boxes, trays, crates, bulk bins or net bags.</td>
<td><strong>Learning experiences for the HSC must address:</strong> Maintenance of containers including:  • replacement of damaged containers  • storage  • repair of holes  • decontamination.</td>
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</table>
What processes should be applied to this competency standard?

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where

0 = not required 1 = perform the process 2 = perform and administer the process 3 = perform, administer and design the process

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<td>2</td>
<td>How can information be collected, analysed and organised (1)?</td>
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<td>3</td>
<td>How are activities planned and organised (1)?</td>
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<td>4</td>
<td>How can team work (1) be applied?</td>
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<td>5</td>
<td>How can the use of mathematical ideas and techniques (1) be applied?</td>
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<td>6</td>
<td>How can problem-solving skills (1) be applied?</td>
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<td>7</td>
<td>How can the use of technology (1) be applied?</td>
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