Modification history

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| Release | Comments |
| Release 1 | This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0. |

| AHCPHT5XX | Evaluate grapes for wine production |
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| Application | This unit of competency describes the skills and knowledge required to collect, process and evaluate grapes for production, monitor and evaluate vineyard, and analyse the effect of climate, site characteristics, grape varieties and viticultural practices on grape quality.  The unit applies to individuals who apply specialised skills and knowledge to the evaluation of grapes for production, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.  No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication. |
| Prerequisite Unit | Nil |
| Unit Sector | Production horticulture (PHT) |

| Elements | Performance Criteria |
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| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
| 1. Collect samples | 1.1 Identify vineyard block to be sampled  1.2 Determine optimum grape sampling time  1.3 Identify and interpret standard sampling procedures  1.4 Utilise vegetation indices where available to identify zones of uniformity or variation  1.5 Confirm sampling areas with client or winemaker  1.6 Observe and record out of specification condition or characteristics of grapes  1.7 take samples of grapes according to standard sampling procedures |
| 2. Process samples | 2.1 Prepare sample processing equipment according to standard sampling procedures  2.2 Extract juice using processing equipment  2.3 Wash processing equipment between samples  2.4 Wash and store processing equipment |
| 3. Evaluate samples | 3.1 Evaluate juice using standard organoleptic procedures  3.2 Perform simple grape analysis procedures and record results  3.3 Evaluate results using quantitative parameters |
| 4. Monitor and evaluate vineyard | 4.1 Establish and document vineyard qualitative parameters  4.2 Monitor qualitative parameters to determine harvest time for optimum wine quality  4.3 Compare results to grape production plan schedule and determine best course of action  4.4 Identify and communicate opportunities to optimise wine quality prior to harvest |
| 5. Analyse the effect of climate, site characteristics, grape varieties and vineyard management practices on wine grape quality | 5.1 Identify effects of climate on grapes  5.2 Identify site effects on grape quality  5.3 Identify and analyse effects of grape variety and grape flavour  5.4 Identify and evaluate effects of vineyard management practices on grapes in terms of modifications and improvements to be made for the current and next season |

| Foundation Skills  This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria. | |
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| Skill | Description |
| Reading | * Identify and interpret wine grape standard sampling procedures, standard organoleptic procedures and quantitative parameters * Identify and interpret grape production plan schedule * Interpret vegetation indices where available |
| Writing | * Document sampling results and vineyard qualitative parameters |
| Oral communication | * Initiate discussions with client or winemaker, using clear language to confirm sampling areas and communicate opportunities to optimise grape quality |
| Numeracy | * Record and evaluate sample data * Interpret quantitative parameters |
| Navigate the world of work | * Identify and describe own workplace requirements associated with own role and area of responsibility |
| Interact with others | * Use appropriate language and communication skills to disseminate information to client or winemaker |

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| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| AHCPHT5XX Evaluate grapes for wine production  Release 1 | Not applicable | New unit | No equivalent unit |

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| Links | Companion Volumes, including Implementation Guides, are available at VETNet:  <https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72> |

| TITLE | Assessment requirements for AHCPHT5XX Evaluate grapes for production |
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| Performance Evidence | |
| An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has evaluated grapes for production on at least two occasions and has:   * utilised vegetation indices where available * collected, processed and evaluated samples using standard sampling procedures * evaluated juice using standard organoleptic procedures * recorded grape analysis results and evaluated results using quantitative parameters, including: * sugar content, soluble solids concentration (SSC) * titratable acidity (TA) * concentration of hydrogen ions in solution (pH) * taste and evaluate grapes * established and documented vineyard qualitative parameters, including: * berry colour and skin splitting * texture * aroma * aftertaste * rachis * berry dehydration * identified areas of concern and opportunities to change harvest plans to optimise grape quality outcomes prior to harvest, including unsuitable or special parcels of fruit * identified and recommended improvements to vineyard management practices that will contribute to enhanced grape quality in the next season * researched, evaluated and recorded information. | |

| Knowledge Evidence |
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| An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:   * principles and practices for evaluating grapes for production, including: * changes to the chemical characteristics of grapes during ripening including SSC, TA and pH * changes to the physical characteristics of grapes during ripening including size, hardness and colour * climatic and physical features of wine grape growing areas and wine styles produced * quantitative parameters of grape testing * sensory evaluation and qualitative parameters of grapes * grape standard sampling procedures * vegetation indices, including: * plant cell density (PCD) maps * normalised difference vegetation index (NDVI) * vineyard management practices and their impact on grapes, including: * plant moisture status management * canopy management * pruning levels * nutrition regimes. |

| Assessment Conditions |
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| Assessment of skills must take place under the following conditions:   * physical conditions: * a workplace setting or an environment that accurately represent workplace conditions * resources, equipment and materials: * grapes * vineyard * sample processing equipment * grape standard sampling procedures * relationships: * clients or winemakers * timeframes: * according to the job requirements.   Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. |

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