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 X.0. |

| AHCBAC3XX | Undertake preparation of land for agricultural crop production |
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| Application | This unit of competency describes the skills and knowledge required to select materials and equipment from crop production plan and prepare the land for an agricultural crop.  The unit applies to individuals who work under broad direction and take responsibility for own work including limited responsibility for the work of others. They use discretion and judgement in the selection and use of available resources and complete routine activities.  No licensing, legislative or certification requirements apply to this unit at the time of publication. |
| Prerequisite Unit | Nil |
| Unit Sector | Broad Acre Cropping (BAC) |

| 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. Determine requirements for land preparation | 1.1 Confirm work requirements from crop production plan with supervisor  1.2 Confirm method of land preparation and order of work from crop production plan  1.3 Identify work health and safety hazards, assess risk and implement controls according to workplace health and safety procedures  1.4 Select, check, use and maintain personal protective equipment |
| 2. Prepare equipment for land preparation | 2.1 Select vehicles, equipment and machinery required for land preparation according to crop production plan  2.2 Inspect vehicles, equipment and machinery for operational use and report faults to supervisor  2.3 Clean vehicles, equipment and machinery according to workplace biosecurity and hygiene procedures  2.4 Check and calibrate equipment and machinery according operator instructions and crop production plan specifications  2.5 Record maintenance and servicing activity according to workplace record keeping procedures |
| 3. Implement land preparation activities | 3.1 Verify timelines, resources and quality standards specified in crop production plan  3.2 Clear land of unwanted debris and waste according to crop production plan, biosecurity and environmental procedures  3.3 Layout land for crop and soil profile according to crop production plan specifications  3.4 Implement weed and pest control measures specified in crop production plan  3.5 Apply fertilisers, ameliorants, or pre-planting treatments according to crop production plan  3.6 Identify and respond to potential implications of land preparations on environment according to workplace environmental procedures  3.7 Operate vehicles and equipment efficiently and safely according to operator instructions and crop production plan specifications  3.8 Monitor vehicle and equipment performance and adjust for [discrepanc](https://thesaurus.yourdictionary.com/discrepancy)ies |
| 4 Complete land preparation operations | 4.1 Clean and store vehicles, equipment and machinery according to workplace biosecurity and hygiene procedures  4.2 Dispose of waste according to workplace environmental procedures  4.3 Maintain records and documentation according to workplace procedures |

| 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 | * Interpret manufacturer specifications, work and maintenance plans, Safety Data Sheets (SDS) and crop standards |
| Writing | * Complete records and documents relevant to crop production and site preparation |
| Numeracy | * Calculate areas, volumes and ratios relevant to the preparation of site and for incorporation of fertilisers, ameliorants and treatments |

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| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| AHCBAC30XXUndertake preparation of land for agricultural crop production | AHCBAC305 Undertake preparation of land for agricultural crop production | Changes to Application.  Consolidated and re sequenced Elements and Performance Criteria.  Added Foundation Skills. Updated Performance Evidence, Knowledge Evidence and Assessment Conditions | Not equivalent |

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

| TITLE | Assessment requirements for AHCBAC3XX Undertake preparation of land for agricultural crop 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 prepared land for at least one agricultural crop and has:   * interpreted and implemented crop production activities according to plans, specifications, crop quality standards and work procedures * conducted accurate measurements for materials and land specifications * adjusted, calibrated and maintained cultivation equipment * conducted pre- and post-operational checks on tools, vehicles and equipment * used tools, machinery and equipment safely incorporating technology to improve efficiency during land preparation * followed workplace health and safety, biosecurity and environmental procedures and practices. | |

| 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 of soils preparation and effect on crop establishment including expected standards for different crop types * soil types and impact of methods for land preparation for crop production, including: * cultivation * deep ripping * spading * mouldboard ploughing * minimum tillage and direct seeding * environmental issues relating to soil preparation activities for cropping, including: * drainage and irrigation systems * soil nutrition and amelioration * waste disposal procedures * disposal or incorporation of preceding crops * legality and impact of land clearing * role of advanced technologies in precision farming practices, including: * variable rate technology (VRT) * self-drive equipment * global navigation satellite systems (GNSS) * laser technologies * controlled traffic farming (CTF) principles and use, including, traffic lanes and impact on soil compaction, water availability, infiltration, plant growth and potential crop yield * a range of pre-planting chemical or organic treatments, their purpose and method of application * safe operation and maintenance of land preparation equipment * work health and safety procedures and principles, including: * manual handling * exposure to hazardous substances * working safely around farm machinery * fire risk and control strategies * enterprise biosecurity and environmental policies. |

| Assessment Conditions |
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| Assessment of the skills in this unit of competency must take place under the following conditions:   * physical conditions: * skills must be demonstrated on a broadacre farm or an environment that accurately represents workplace conditions * resources, equipment and materials: * use of site preparation tools, machinery and equipment * use of fertilisers, ameliorants and treatments * use of personal protective equipment * specifications: * use of workplace policies and procedures * use of manufacturer operating instructions for tools, equipment and machinery * use of workplace plans and specifications   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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