



Australian Government

AHCBAC309 Undertake preparation of land for agricultural crop production

Release: 1

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Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

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.

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
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

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Select, check, use and maintain personal protective equipment (PPE)
2. Prepare for land preparation	2.1 Select vehicles, equipment, machinery or technology 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 Implement weed and pest control measures specified in crop production plan 3.4 Apply fertilisers, ameliorants, or pre-planting treatments according to crop production plan 3.5 Identify and respond to potential implications of land preparations on environment according to workplace environmental procedures 3.6 Operate vehicles and equipment efficiently and safely according to operator instructions and crop production plan specifications 3.7 Monitor vehicle and equipment performance and adjust for discrepancies
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.

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

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBAC309 Undertake preparation of land for agricultural crop production	AHCBAC305 Undertake preparation of land for agricultural crop production	Edited Application for clarity Consolidated and re sequenced Elements and Performance Criteria for clarity Foundation Skills refined Performance Evidence and Knowledge Evidence clarified and terminology updated Amended structure of Assessment Conditions	Equivalent

Links

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

Assessment Requirements for AHC309 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
- fitted and used PPE
- 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
- cleaned and stored vehicles, equipment and machinery
- disposed of waste
- maintained records and documentation.

Knowledge Evidence

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
- principles of precision agriculture and the role of technology in improving efficiencies, including:
 - self-drive, auto steer, global navigation satellite systems (GNSS) and laser technologies
 - digital and remote sensors
 - remote piloted systems
 - controlled traffic farming (CTF) principles and impacts
 - variable rate technology (VRT)
 - integrated pest and weed management techniques
- 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
 - power lines and elevated equipment safety
- workplace biosecurity and environmental policies.

Assessment Conditions

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
- relationships
 - supervisor
- resources, equipment and materials:
 - site preparation tools, machinery and equipment
 - fertilisers, ameliorants and treatments
 - personal protective equipment (PPE)

- specifications:
 - workplace policies and procedures
 - manufacturer operating instructions for tools, equipment and machinery
 - 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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