



**Australian Government**

# **AHCECR304 Undertake direct seeding**

**Release: 1**

# AHCECR304 Undertake direct seeding

## Modification History

| Release   | Comments                                                                                                                    |
|-----------|-----------------------------------------------------------------------------------------------------------------------------|
| Release 1 | This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0. |

## Application

This unit of competency describes the skills and knowledge required to regenerate and rehabilitate natural areas using direct seeding methods according to the revegetation plan.

The unit applies to individuals who work in the conservation and land management industry under broad supervision and who take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems

No licensing, legislative or certification requirements apply to this unit at the time of publication.

## Pre-requisite Unit

Nil

## Unit Sector

Ecological Restoration (ECR)

## 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. Prepare resources for direct seeding          | 1.1 Interpret and clarify requirements for seeding from site revegetation plan<br>1.2 Select equipment and materials according to revegetation plan and site conditions<br>1.3 Identify health and safety hazards, assess risks 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 Check equipment operation and conduct pre-start checks<br>1.5 Identify site environmental and heritage issues, and implement control measures according to workplace procedures                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. Prepare seed for direct seeding               | 2.1 Source seed from provenance specified in revegetation plan<br>2.2 Determine type and proportion of cover crop according to revegetation plan and site conditions<br>2.3 Check seed species and quality against required specifications in revegetation plan, and report inconsistencies to supervisor<br>2.4 Prepare seed to promote and improve germination according to revegetation plan<br>2.5 Prepare revegetation site to receive seed                                                                                                                    |
| 3. Conduct direct seeding operations             | 3.1 Conduct seeding operations according to workplace health and safety and biosecurity procedures<br>3.2 Implement direct seeding methods and quantities to achieve plant coverage specified in the revegetation plan<br>3.3 Use direct seeding equipment and techniques that minimise damage to site and according to environmental procedures<br>3.4 Conduct seeding activities according to the season and growing conditions specified in the revegetation plan<br>3.5 Carry out soil fertilising and amelioration of site according to site revegetation plan |
| 4. Complete operations                           | 4.1 Clean and store seeding equipment according to manufacturer, enterprise and biosecurity procedures<br>4.2 Record and document seeding activities according to workplace requirements                                                                                                                                                                                                                                                                                                                                                                            |

## 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 |
|-------|-------------|
|-------|-------------|

| Skill    | Description                                                                                                                                                                                           |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reading  | <ul style="list-style-type: none"><li>Interpret revegetation plans and use the information to comply with work requirements and the standards of direct seeding operations</li></ul>                  |
| Numeracy | <ul style="list-style-type: none"><li>Transpose dimensions from scale drawings to define the size of the site and calculate seed quantities to achieve planned revegetation plant densities</li></ul> |

## Unit Mapping Information

| Code and title current version        | Code and title previous version       | Comments                                                                                                                                                                                                         | Equivalence status |
|---------------------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| AHCECR304<br>Undertake direct seeding | AHCNAR304<br>Undertake direct seeding | Changed unit code to reflect new unit sector<br><br>Changes to Application and Performance Criteria to rationalise and clarify<br><br>Updated Performance Evidence, Knowledge Evidence and 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 AHCECR304 Undertake direct seeding

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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 at least one revegetation site for direct seeding and used techniques and equipment to distribute seed according to planned specifications.

There must also be evidence that the individual has:

- conducted work according to workplace health and safety and biosecurity procedures
- prepared the site for seeding with consideration to environmental impacts
- conducted seeding to maximise germination response
- completed seeding operations with no damage to the environment
- operated, cleaned, maintained and stored equipment safely and according to manufacturer instructions and workplace requirements.
- 

## 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:

- seeding techniques used on natural area and revegetation sites
- ecological principles related to revegetation and seeding of sites, including:
  - recognition of fundamental ecosystem structures
  - interactions between flora and fauna and impact on ecological stability
  - vegetation types and their general characteristics relevant to seeding operations
- importance of biodiversity when restoring a site for ecological stability:
  - terrestrial plants and basic plant community structures
  - marine and water plants and interaction with marine creatures
  - contribution of revegetation and seeding work for promoting biodiversity
  - relationships between microbiota and seed germination

- basic genetic principles for ecological restoration, including:
  - protecting the genetic integrity of local genotypes
  - ensuring sufficient genetic diversity for survival and adaptation
- identifying ecological areas with natural regeneration potential
- operation, maintenance and safety of seeding equipment
- environmental factors to be considered for direct seeding operations, including:
  - ecology in land based, coastal zones or marine parks
  - marine, coastal shore and terrestrial species
  - pollution and potential damage to seed germination
  - soil type and geology for accessing sites and conducting seeding operations
- factors affecting the timing and method of seeding, including:
  - weather
  - climate
  - tidal influences
  - soil/substrate type and condition
  - access to site
  - impact of plant growth cycles
- workplace health and safety procedures, including:
  - safety hazards and associated risks on revegetation sites
  - personal protective equipment
  - handling, mixing and using hazardous treatments
  - sun protection
  - materials handling safety
  - exclusion fencing
- basic plant physiology of seeds and seed germination, including:
  - process of seed germination
  - environmental conditions supporting seed germination
  - soil conditions supporting seed germination
  - inhibitor to seed germination
  - seed treatments to promote germination and success
  - viable and non-viable seed.

## 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 revegetation site or in an environment that accurately represents workplace conditions
- resources, equipment and materials:

- seed specified in revegetation plan
- tools and equipment for preparing site and dispersing seed
- personal protective equipment
- specifications:
  - specific workplace procedures and processes
  - manufacturer operating instructions for equipment and machinery used
  - revegetation 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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