



Australian Government

Department of Education, Employment and Workplace Relations

AHCSDP403A Plan and implement seed crop maintenance

Release 1

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Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

Unit Descriptor

This Unit covers the planning and implementation of seed crop maintenance and defines the standard required to: accurately assess crop needs; carry out crop cultural practices and treatments; monitor and assess crop maturity; ascertain water requirements from survey advice and weather forecasts; accurately measure soil moisture and interpret data; determine time of harvest with specialist advice.

Application of the Unit

This Unit applies to farm supervisors and cropping managers who maintain the health of agricultural crops.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Nil.

Employability Skills Information

This Unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1. Determine condition of seed crops
 - 1.1 Measurement and assessment of soil moisture is undertaken to calculate soil water percentage.
 - 1.2 Water requirements are calculated according to soil analysis data, standing crop, and forecast weather conditions.
 - 1.3 Nutrient requirements and availability for crops are assessed and deficiencies identified.
 - 1.4 Factors affecting crop capacity are identified.
 - 1.5 Sustainable land management is implemented according to enterprise requirements and environmental standards.
2. Determine pest control
 - 2.1 Evidence of pests and disease is assessed and integrated control measures appropriate to type and species of infestation are determined.
 - 2.2 Areas of weed infestation, which may be reduced or eradicated, are located and species identified.
 - 2.3 Integrated control methods are selected to control pests and weeds.
 - 2.4 Control methods are scheduled at the optimum time with minimal damage to the crop.
 - 2.5 Severity of infestations and records of treatments are maintained to provide essential data for future management programs.
3. Manage **crop** health
 - 3.1 Crop is planned and monitored to maintain water and nutritional requirements for optimal production.
 - 3.2 Weed and pest levels are monitored and the control program modified as required.
 - 3.3 Benefits from soil and plant inputs and treatments are assessed and documented for analysis in future management programs.
 - 3.4 Cropping programs are monitored for efficiency and effectiveness, and documented for future best practice.
 - 3.5 Relevant data is documented for continual analysis and effective crop management.

Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

Required skills include:

Ability to:

- refer to records of, and assess, soil health and nutrient status
- dispatch soil samples to laboratories
- carry out a soil health appraisal
- identify likely threats to crop from pests, weeds and diseases
- recognise damage to crop caused by weeds, pests or diseases
- recognise poor growth and lack of vigour in crop caused by nutrient deficiency
- record monitoring results
- plan and implement integrated control strategies to address nutrient deficiencies, disease outbreaks, pest and weed infestations
- accurately measure soil moisture and estimate irrigation needs if required
- apply pesticides or fertility treatments as required
- communicate with industry, suppliers and other personnel
- read and interpret Material Safety Data Sheets (MSDSs), production plans and analysis results
- estimate and measure pest control treatments
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge includes:

Knowledge of:

- crop growth stages and keys
- crop growth requirements compared to soil nutrient status
- fertiliser and soil ameliorant types and application times, methods and rates
- chemical use if applicable
- factors leading to development of chemical resistance
- integrated pest management strategies
- life-cycles of pest, diseases and weeds
- Occupational Health and Safety (OHS) legislative requirements
- relevant codes of practice with regard to the use and control of hazardous substances
- legislation and codes of practice with regard to environmental protection.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following: • accurately assess crop needs • carry out crop cultural practices and treatments • monitor and assess crop maturity • ascertain water requirements from survey advice and weather forecasts • accurately measure soil moisture and interpret data • determine time of harvest with specialist advice.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Crops may include:

- wheat and coarse grains
- cotton
- grain legumes
- oilseeds
- temperate pastures
- tropical pastures
- vegetables and other horticultural seed crops.

Unit Sector(s)

Seed Production