



Australian Government

Department of Education, Employment and Workplace Relations

AHCBAC404A Plan and implement agricultural crop maintenance

Release: 1

AHCBA404A Plan and implement agricultural crop maintenance

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the planning and implementation of agricultural 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.
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Application of the Unit

Application of the unit	This unit applies to farm supervisors and cropping managers who maintain the health of agricultural crops.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
1. Determine condition of agricultural 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

REQUIRED SKILLS AND KNOWLEDGE

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- 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

- 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

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.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole.

The range of crops may include:

- wheat and coarse grains
- cotton
- grain legumes
- oilseeds
- sugar
- temperate and tropical pastures.

Unit Sector(s)

Unit sector	Broadacre cropping
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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