

Modification history

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 7.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

AHCLSK507	Plan, monitor and evaluate strategies to improve livestock through genetics
Application	<p>This unit of competency describes the skills and knowledge required to improve livestock through genetics, including determining breeding goals, assessing current performance, selecting livestock for genetic improvement, implementing and monitoring the breeding program and evaluating the program against breeding goals.</p> <p>The unit applies to individuals who apply specialist skills and knowledge to planning, monitoring and evaluating strategies to improve livestock through genetics, take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.</p> <p>All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, animal welfare legislative, regulatory and codes of practice requirements, and sustainability and biosecurity practices.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
Prerequisite Unit	Nil
Unit Sector	Livestock (LSK)

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 breeding goals for the livestock enterprise in relation to market specifications	1.1 Select product specification suited to the breeding enterprise 1.2 Determine the breeding goals and the strategy to meet market specifications 1.3 Analyse the traits affecting profit in a livestock breeding enterprise to optimise production through an improved breeding program 1.4 Assess workplace environment and select a breed and breeding program to match the environment
2. Assess current performance of the breeding program	2.1 Collect and analyse data on the traits currently used in the breeding program 2.2 Collect and analyse data on current market performance, using customer feedback
3. Assess and select livestock for genetic improvement	3.1 Assess the current breeding livestock for the traits required for production and marketing 3.2 Analyse existing livestock subjective and objective information and select replacements from existing livestock 3.3 Evaluate the costs and benefits of natural mating, Artificial Insemination (AI) and Embryo Transfer (ET) to achieve genetic improvement 3.4 Select and purchase livestock for genetic improvement where required

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Carry out a breeding program	4.1 Develop and monitor workplace health and safety procedures to be followed while implementing the animal breeding program 4.2 Conduct program according to relevant State or Territory legislative requirements and environmental, biosecurity and animal welfare requirements 4.3 Assess and improve the facilities on the property for drafting and pregnancy testing, and insemination where applicable 4.4 Apply practices to improve joining and conception rates of a breeding program 4.5 Assist genetic selection by using equipment to aid in data collection and analysis 4.6 Collect feedback to improve production and market performance
5. Evaluate the breeding program against the breeding goals	5.1 Assess the compliance of the livestock to the market specifications using information including feedback sheets and test results 5.2 Assess the livestock produced against the breeding goals

Foundation Skills	
<i>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.</i>	
Skill	Description
Reading	Identify and interpret textual information from a range of sources to identify relevant and key information about livestock improvement strategies
Writing	Use clear language, accurate industry terminology and logical structure to prepare workplace health and safety procedures
Numeracy	Use mathematical concepts to compare, analyse and evaluate numerical and financial data required for planning and evaluating livestock improvements

Unit Mapping Information			
Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSK507 Plan, monitor and evaluate strategies to improve livestock through genetics Release 2	AHCLSK507 Plan, monitor and evaluate strategies to improve livestock through genetics Release 1	Minor changes to application minor changes to performance criteria foundation skills added assessment requirements updated	Equivalent

Links	Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72
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TITLE	Assessment requirements for AHCLSK507 Plan, monitor and evaluate strategies to improve livestock through genetics
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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 planned, monitored and evaluated strategies to improve livestock through genetics on at least one occasion and has:

- analysed profit for the breeding program
- selected suitable market specifications for the livestock enterprise
- developed selection criteria for a breeding program
- selected livestock for a breeding program on phenotype and genotype
- assessed farm facilities to carry out a breeding program
- used estimated breeding values
- arranged Artificial Insemination (AI) and Embryo Transfer (ET) programs where applicable
- developed workplace health and safety procedures relevant to the breeding program
- applied relevant environment and biosecurity legislation, regulations and workplace procedures
- applied relevant workplace animal welfare legislation, codes of practice and procedures
- implemented the breeding program
- kept breeding and production records
- interpreted feedback information.

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:

- workplace requirements applicable to health and safety in the workplace for planning, monitoring and evaluating strategies to improve livestock through genetics
- environment and biosecurity legislation and regulations and workplace practices relevant to planning, monitoring and evaluating strategies to improve livestock through genetics
- principles and practices for planning, monitoring and evaluating strategies to improve livestock through genetics, including:
 - heritability estimates for the selected characteristics
 - recording and understanding breed pedigrees where applicable
 - dominant genetic traits and genetic correlations
 - accuracy of the genetic potential of the selected breeding trait for the program
 - genetic defects
 - value of hybrid vigour and line breeding in a breeding program
 - impact of generation interval on genetic gain
 - selection criteria
 - market specifications targeted by the breeding program
 - long term breeding aims
 - pregnancy testing procedure
 - sources for genetic information, up to date program design and implementation procedures
 - animal welfare legislation codes of practice and procedures relevant to planning, monitoring and evaluating strategies to improve livestock through genetics.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- specifications:
 - workplace requirements applicable to health and safety in the workplace for planning, monitoring and evaluating strategies to improve livestock through genetics
 - environment and biosecurity legislation and regulations and workplace practices applicable to planning, monitoring and evaluating strategies to improve livestock through genetics
 - industry standards, legislation and codes of practice and procedures for animal welfare applicable to planning, monitoring and evaluating strategies to improve livestock through genetics

Assessment Conditions	
<ul style="list-style-type: none">timeframes:<ul style="list-style-type: none">according to job requirements. <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	
Links	Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72