

Training Package	Rural Production (RTE03)	HSC Requirements and Advice
Title	Provide feed for livestock	
Unit code RTE2128A	This competency standard covers the process of preparing and providing feed for livestock in an extensive agricultural environment. It requires the application of knowledge and skills to check livestock condition, assess feed availability and provide supplementary feeding where required, and report and maintain records. In addition, it requires an awareness of animal welfare and behaviour, and safe workplace and sustainable environmental practices associated with livestock production. The work is likely to be carried out under close supervision with regular checking within enterprise guidelines.	HSC Indicative Hours 15

Evidence Guide

What evidence is required to demonstrate competence for this standard as a whole?

Competence in feeding livestock requires evidence of the ability to follow a feeding plan accurately to meet the nutritional requirements of livestock. It involves the ability to monitor and record livestock condition, apply methods and procedures to provide feed and feed supplements, safely handle livestock, recognise hazards, report feeding abnormalities and maintain records. Evidence must also be demonstrated in the employment of safe workplace and positive environmental practices associated with livestock production. The skills and knowledge required must be **transferable** to another rural environment. For example, this may include different breeds, animals, enterprises and feed stuffs.

What specific knowledge is needed to achieve the performance criteria?	What specific skills are needed to achieve the performance criteria?	Are there other competency standards that could be assessed with this one?	Assessment guide	HSC Requirements and Advice
<p>Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:</p> <ul style="list-style-type: none"> • nutritional requirements for livestock (including water) • types of feed and feed supplements (including pastures and grazing) • types of noxious and toxic plants relevant to feeding areas • livestock health and behaviour • livestock scoring and weighing methods • environmental impact of livestock on ground cover and 	<p>To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complimentary skills are required. These include the ability to:</p> <ul style="list-style-type: none"> • provide feed and feed supplements in accordance with feeding plan • monitor livestock health and condition, and recognise abnormalities • employ safe and environmentally responsible systems and procedures with regard to the handling of livestock and feed • recognise and report environmental implications associated with livestock 	<p>This competency standard <u>could</u> be assessed on its own or in combination with other competencies relevant to the job function.</p>	<p>There is essential information about assessing this competency standard for consistent performance and where and how it may be assessed, in the Assessment Guidelines for this Training Package. All users of these competency standards must have access to the Assessment Guidelines. Further advice may also be sought from the relevant Sector Booklet.</p>	<p>Key Terms and Concepts</p> <ul style="list-style-type: none"> • animal health and welfare • contaminants • dietary requirements • environmental considerations • feed quality • feed supplements • feed wastage and spoilage • feeding abnormalities • feeding frequency • feeding plan • handling techniques • hazard identification • livestock • livestock condition • livestock watering methods • occupational health and safety (OHS)

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<p>minimisation measures</p> <ul style="list-style-type: none"> • safe livestock handling techniques and procedures • hazards associated with handling livestock and control measures • State/Territory legislation, regulations and codes of practice with regard to OHS and animal welfare • personal protective clothing and equipment and when and how it should be used • enterprise policies with regard to feeding livestock, recording and reporting routines. 	<p>production</p> <ul style="list-style-type: none"> • read and interpret feeding plan, work plan and supervisors instructions • communicate and report livestock feeding abnormalities and workplace hazards, and maintain livestock records • assess and calculate herd/flock numbers, measure feed and rate and frequency of feeding. 			<ul style="list-style-type: none"> • personal protective equipment (PPE) • physiological state • production objectives • supplementation • water quality • water supply • workplace records

Element	Performance Criteria	Range of Variables	HSC Requirements and Advice
1 Prepare for feeding	1.1 Condition and health status of livestock is checked and recorded in line with enterprise requirements.	<p>The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.</p> <p>For more information on contexts, environment and variables for training and assessment refer to the Sector Booklet.</p> <p>How might livestock condition and health status be checked?</p> <p>Condition may be checked by weighing and condition scoring, and health status may be determined by general observation of animal soundness and well being.</p> <p>What livestock are covered in this standard?</p> <p>Sheep, dairy and beef cattle, horses, goats, and alpacas.</p> <p>What enterprise requirements may apply to this standard?</p> <p>Standard Operating Procedures, industry standards, production schedules, work notes, product labels, manufacturers specifications, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), OHS procedures, supervisors oral or written instructions, work and feeding plans.</p>	<p>Learning experiences for the HSC must address:</p> <p>Enterprise requirements for livestock feeding including:</p> <ul style="list-style-type: none"> • production for fibre growth • milk production • pregnancy • lactation • maintenance of body weight • muscle growth and fat deposition for market requirements • survival in drought conditions • supplementation of pasture • supplementation for specific dietary deficiencies • meeting energy demands for working animals. <p>A basic understanding of animal welfare legislation requirements including:</p> <ul style="list-style-type: none"> • <i>Prevention of Cruelty to Animals Act 1979</i> (NSW) (as amended) • <i>Prevention of Cruelty to Animals (General) Regulation 1996</i> (NSW) • Australian code of practice for the care and use of animals for scientific purposes. <p>A basic understanding of the role of the</p> <ul style="list-style-type: none"> • Animal Welfare Unit, NSW Agriculture • Royal Society for Prevention of Cruelty to Animals (RSPCA) NSW • Animal Welfare League (AWL) NSW • Rural Lands Protection Board. <p>The condition of animals including:</p> <ul style="list-style-type: none"> • physiological state <ul style="list-style-type: none"> – lactating – pregnancy – maintenance – fibre growth – drought survival – weight loss in relationship to critical body weight • fat score <ul style="list-style-type: none"> – fat depth over the 11th – 12th rib

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			<ul style="list-style-type: none"> – fat depth in relation to physiological state • body <ul style="list-style-type: none"> – measurement using scales, tapes and estimation – significant changes. <p>The health of animals including:</p> <ul style="list-style-type: none"> • condition of <ul style="list-style-type: none"> – teeth – feet – coat/fleece/skin • mucous membranes • physical injuries • abnormal behaviour • external and internal parasites • scouring • interaction between climate and feed requirements.
	<p>1.2 Feed and feed supplements are confirmed and prepared in line with feeding plan.</p>	<p>What type of feed and feed supplements may be checked and provided to livestock?</p> <p>Feed and feed checks may include identifying species of grass/legume, quantity of feed, quality of feed, the incidence of toxic species and weeds, and checking for cleanliness and freshness including the removal of stale or contaminated food. Feed supplements may include hay, grain, trace elements, vitamins and sources of nutrients including silage, paddock feed, grain legumes, mineral blocks, calcium and other nutrient supplements, and specific purpose feeds. Supplementary feeding may be required to cover seasonal, drought or other feed shortages and trace element deficiencies.</p> <p>What might be included in a feeding plan?</p> <p>Target weights, amount and type of feed and feed supplements, how to introduce livestock to supplementary feeding, feeding frequency and rates, feeding methods and procedures, weed control strategy, supervisors instructions, and reporting and recording requirements.</p>	<p>Learning experiences for the HSC must address:</p> <p>Knowledge of a range of feed and feed supplements including:</p> <ul style="list-style-type: none"> • pasture (grasses and legumes) • grains (cereal and pulse) • fodder crops • silage • hay • haylage • prepared feeds (pellets, cubes and grain mixes) • mineral and lick blocks • by products • feed additives • specific purpose feeds. <p>Dietary requirements for livestock:</p> <ul style="list-style-type: none"> • energy • fat • protein • minerals • vitamins • water • roughage.

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			<p>Feed checks including:</p> <ul style="list-style-type: none"> • type of feed • quantity of feed • quality of feed • incidence of <ul style="list-style-type: none"> – toxic substances – weeds • contaminants • cleanliness • freshness. <p>Information provided in feeding plans including:</p> <ul style="list-style-type: none"> • production objectives • amount and type of feed • dietary requirements to meet production objectives • supplementary feeding • pasture and crop rotation • weed control strategy • feeding frequency and rates • feeding methods and procedures.
	<p>1.3 Water supply, quality and quantity is checked and maintained to meet livestock requirements and enterprise requirements.</p>	<p>What might be included in checking water supply, quality and quantity?</p> <p>This may include the observation of availability, quantity, reserves, flow rate, serviceability, number of livestock using water point, the presence of algal bloom, contamination, signs of deterioration, and checking water supply sources and systems for correct operation.</p> <p>What enterprise requirements may apply to this standard?</p> <p>Standard Operating Procedures, industry standards, production schedules, work notes, product labels, manufacturers specifications, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), OHS procedures, supervisors oral or written instructions, work and feeding plans.</p>	<p>Learning experiences for the HSC must address:</p> <p>Methods of providing water to livestock including:</p> <ul style="list-style-type: none"> • storage dams • flowing streams, creeks and rivers • water troughs • self-watering devices. <p>Possible problems experienced with watering sources including:</p> <ul style="list-style-type: none"> • silt and mud • erosion of banks • damage to water fittings • failure of water supply systems. <p>Maintenance of water supply:</p> <ul style="list-style-type: none"> • factors influencing livestock water consumption <ul style="list-style-type: none"> – litres/animal/day – feed type – climate – physiological state

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			<ul style="list-style-type: none"> - water quality - accessibility • water delivery requirements <ul style="list-style-type: none"> - flow rates - pumps - water availability - observation of water quality - blue-green algae - total soluble salts - turbidity - organic contamination - chemical pollutants - high water temperature.
	<p>1.4 Existing and potential OHS hazards in the workplace are identified and reported to the supervisor.</p>	<p>What existing and potential and hazards may be encountered in the workplace?</p> <p>Livestock movement and handling, solar radiation, organic and other dusts, excessive noise, and moving machinery and vehicles.</p>	<p>Learning experiences for the HSC must address:</p> <p>Awareness of potential OHS hazards including:</p> <ul style="list-style-type: none"> • zoonoses • manual handling • inhalation of organic and mineral dusts • grain chemical treatments • machinery and vehicles • climate • livestock movement and handling.
<p>2 Feed livestock</p>	<p>2.1 Suitable personal protective clothing and equipment is selected, used and maintained in accordance with OHS requirements.</p>	<p>What personal protective clothing and equipment may be relevant to this standard?</p> <p>Boots, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sunscreen).</p> <p>What OHS requirements may be applicable to this standard?</p> <p>Safe livestock handling systems and procedures including zoonoses (Q Fever), identify hazards and report risks, safe manual handling systems and procedures, safe livestock handling procedures, safe systems and procedures for handling and storage of grain and feed to reduce risk associated with organic and other dusts, safe systems and procedures for outdoor work including protection from solar radiation,</p>	<p>Learning experiences for the HSC must address:</p> <p>Selection, use, maintenance and storage of personal protective equipment (PPE) appropriate to work task.</p> <p>A range of PPE including:</p> <ul style="list-style-type: none"> • footwear • head protection – hard hat, sun hat and helmet • gloves • overalls • apron • respirator • face mask • hearing protection • eye protection – goggles, safety glasses and face guard

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		protection from dust, and the appropriate use of personal protective clothing and equipment	<ul style="list-style-type: none"> • sunscreen • waterproof clothing. <p>Importance of correct fitting PPE.</p> <p>Maintenance of PPE according to manufacturer's instructions and enterprise Standard Operating Procedures (SOP):</p> <ul style="list-style-type: none"> • cleaning and decontamination • correct storage • regular checks for damage • repair/replacement of worn, malfunctioning or damaged equipment/parts • disposal of single-use equipment.
	2.2 Feed and feed supplements are provided in accordance with feeding plan and enterprise requirements.	<p>What type of feed and feed supplements may be checked and provided to livestock?</p> <p>Feed and feed checks may include identifying species of grass/legume, quantity of feed, quality of feed, the incidence of toxic species and weeds, and checking for cleanliness and freshness including the removal of stale or contaminated food. Feed supplements may include hay, grain, trace elements, vitamins and sources of nutrients including silage, paddock feed, grain legumes, mineral blocks, calcium and other nutrient supplements, and specific purpose feeds. Supplementary feeding may be required to cover seasonal, drought or other feed shortages and trace element deficiencies.</p>	<p>Learning experiences for the HSC must address:</p> <p>Providing appropriate feed quantities including:</p> <ul style="list-style-type: none"> • weighing out feedstuffs • filling hoppers and feedbins • ad lib versus restricted access • bale unrollers • grain trails • feed mixers • hammer mills • roller mills • front end loader and hay forks.
	2.3 Feeding process is monitored to ensure livestock are feeding effectively in accordance with feeding plan.	<p>What might be included in a feeding plan?</p> <p>Target weights, amount and type of feed and feed supplements, how to introduce livestock to supplementary feeding, feeding frequency and rates, feeding methods and procedures, weed control strategy, supervisors instructions, and reporting and recording requirements.</p>	<p>Learning experiences for the HSC must address:</p> <p>Points to consider when monitoring the feeding process to ensure adequate feeding including:</p> <ul style="list-style-type: none"> • shy feeders • frequency of feeding • trough and feeder space per animal • creep feeding • lactating and nursing by dams • avoiding grain poisoning by gradual introduction of grain diets • adjusting diet to climatic conditions • overgrazing • grazing pressure • estimation of dry matter per hectare in pasture

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			<ul style="list-style-type: none"> • estimation of pasture quality <ul style="list-style-type: none"> – dry matter percentage – total dry matter – legume content – grass content – dead matter content.
	2.4 Procedures to minimise feed wastage and spillage, and dispose and recycle feed waste are followed in line with enterprise requirements.	What procedures might be implemented to minimise feed wastage and spillage? The accurate measurement of feed quantities, the use of precise measurement devices and apparatus, and the accurate determination of livestock feed requirements.	Learning experiences for the HSC must address: Minimising feed wastage and spoilage through: <ul style="list-style-type: none"> • frequency of feeding • use of self-feeders and hay racks • providing appropriate amounts of feed • location of feeding – avoiding wet, boggy conditions • stale feed and poor feed quality.
	2.5 Variations to individual eating and drinking patterns are noted and reported.		Learning experiences for the HSC must address: Causes/indicators of abnormal eating behaviour to report including: <ul style="list-style-type: none"> • grain poisoning • milk fever • shy feeders • bossy feeders • loss of condition • abnormal behaviour • acute internal parasites infestation • pink eye • drooling • fly strike • mastitis • parturition • feet problems • symptoms of plant toxicity • bloat • condition of teeth.

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3 Complete the feeding process	3.1 Feeding process is evaluated and recorded in accordance with workplace procedures.		<p>Learning experiences for the HSC must address:</p> <p>Evaluation of feeding processes including:</p> <ul style="list-style-type: none"> • measurement of outcomes defined by the feeding plan <ul style="list-style-type: none"> – actual body weight – rate of weight gain/loss – change in fat score – achievement of production objectives – quantities of feed consumed • environmental implications associated with feeding livestock <ul style="list-style-type: none"> – reduction of ground cover – destruction of improved pasture species – destruction of native vegetation – destruction of riparian habitat along streams and rivers – pollution of rivers and streams by livestock faeces.
	3.2 Feeding abnormalities are recorded and reported to the supervisor in line with enterprise requirements.	<p>What feeding abnormalities may be observed?</p> <p>This may include the general observation of sick animals, shy feeders, weight loss, scouring, greedy (bossy) feeders, and ill thrift.</p> <p>What enterprise requirements may apply to this standard?</p>	<p>Learning experiences for the HSC must address:</p> <p>Feeding abnormalities to record including:</p> <ul style="list-style-type: none"> • death • changes in animal health and behaviour • feed wastage.
	3.3 A clean and safe area is maintained during and on completion of feeding in accordance with OHS and enterprise requirements.	<p>Standard Operating Procedures, industry standards, production schedules, work notes, product labels, manufacturers specifications, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), OHS procedures, supervisors oral or written instructions, work and feeding plans.</p> <p>What OHS requirements may be applicable to this standard?</p> <p>Safe livestock handling systems and procedures including zoonoses (Q Fever), identify hazards and report risks, safe manual handling systems and procedures, safe livestock handling procedures, safe systems and procedures for handling and storage of grain and feed to reduce</p>	<p>Learning experiences for the HSC must address:</p> <p>OHS issues recording of including:</p> <ul style="list-style-type: none"> • OHS hazards and incidents • actions required to overcome OHS problems. <p>Appropriate communication channels for reporting OHS problems</p> <ul style="list-style-type: none"> • verbal notification • written reporting.

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		risk associated with organic and other dusts, safe systems and procedures for outdoor work including protection from solar radiation, protection from dust, and the appropriate use of personal protective clothing and equipment.	

What processes should be applied to this competency standard?

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the **key competencies**, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where

0 = not required 1 = perform the process 2 = perform and administer the process 3 = perform, administer and design the process

1. How can communication of ideas and information (1) be applied?	Information and ideas about the feeding plan can be communicated to feed suppliers and other people in the workplace.
2. How can information be collected, analysed and organised (2) ?	Information regarding the observation and monitoring of feeding is gathered and analysed, and organised by records and reports.
3. How are activities planned and organised (2) ?	Activities can be planned and co-ordinated with feeding and monitoring routines.
4. How can team work (2) be applied?	Teamwork could be involved in implementing and monitoring procedures to achieve feeding requirements.
5. How can the use of mathematical ideas and techniques (1) be applied?	Mathematics could be applied in the measurement and calculation of feed, and feed frequency requirements.
6. How can problem-solving skills (1) be applied?	Problems of supply and demand will need to be anticipated and addressed quickly to ensure the adequate provision of feed and water requirements.
7. How can the use of technology (1) be applied?	The use of technology can be applied to assist in the calculation and development of a feeding plan, in the recording of information, and to communicate and inform on the feeding process.