

Training Package	Rural Production (RTE03)	HSC Requirements and Advice
Title	Undertake basic shearing and crutching	
Unit code RTE1105A	This competency standard covers basic wool removal as part of a shearing and crutching operation. Competency requires an awareness of enterprise and legislative requirements with regard to shearing practices and shearing shed procedures. The work would be carried out under direct supervision.	HSC Indicative Hours 20

Evidence Guide

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

Competence in this standard requires evidence of the ability to undertake basic shearing and crutching of sheep using industry accepted methods and procedures. It also requires the ability to safely operate shearing equipment and avoid damage to sheep and fleece. Evidence must also be demonstrated in the employment of safe workplace and positive environmental practices.

The skills and knowledge to shear sheep must be **transferable** to a different work environment. For example, this could include different sheep breeds, wool types and conditions.

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"> types of shearing sheds, boards and catching pens shearing machinery required and their relative functions industry agreed shearing and crutching techniques, and positions and method of shearing safe handling techniques for catching, dragging, shearing and releasing sheep 	<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"> select and use equipment and materials appropriate for shearing sheep avoid contamination, second cuts and damage to wool, sheep and people catch and release sheep safely demonstrate safe and responsible workplace practices provide due care and handle sheep humanely clean and maintain shearing equipment, site and facilities 	<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 welfare comb and cutter contamination crutching techniques down tube equipment fleece condition grinder handpiece hazard identification health and fitness manual handling techniques occupational health and safety (OHS) personal protective equipment (PPE) post-shearing care

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<ul style="list-style-type: none"> • anatomy of all types of sheep • sheep diseases • animal welfare requirements in relation to sheep • sheep behaviour • personal protective clothing and equipment and when and how it should be used • Federal Pastoral Industry Award, and/or State Shearing Award of Queensland, and/or Western Australian Shearing Contractors Award • relevant State/Territory legislation and awards, regulations and codes of practice with regard to workplace OHS and animal welfare. 	<ul style="list-style-type: none"> • communicate problems, faults and workplace hazards, and to comprehend instructions provided by the owner or overseer. 			<ul style="list-style-type: none"> • <i>Prevention of Cruelty to Animals Act 1979 (NSW) (as amended)</i> • risk assessment • shearing practices • shearing quality • shearing shed facilities • sheep behaviour • sheep characteristics • sheep diseases • tension • wool classer

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1 Set-up shearing handpiece as directed	1.1 Potential and existing hazards in the workplace are identified and reported to supervisor.	<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>What potential and existing hazards may be encountered in the workplace?</p> <p>Sheep movement and handling, loose boards, obstacles, veterinary chemicals, damaged pens, uneven flooring, uncovered belts, poor drag, unsafe equipment and machinery, and loose clothing.</p>	<p>Learning experiences for the HSC must address:</p> <p>Types of shearing sheds including:</p> <ul style="list-style-type: none"> • raised board • curved raised board • front fill catching pen • traditional one level board • under floor sheep storage. <p>An OHS risk assessment of the shearing work area to identify possible risks including:</p> <ul style="list-style-type: none"> • shed infrastructure <ul style="list-style-type: none"> – protruding objects in pens and gateways – catching pen doors – height differences between the catching pen floor and the shearing board – loose boards and protruding nails in the catching pen and shearing board – raised board sheds – steps leading up to raised boards • shearing equipment <ul style="list-style-type: none"> – incorrectly adjusted safety clutches in down tube – poor maintenance of friction cone, drive cogs and elbow guards in down tube – damage to down tube – damaged and incorrect length pull-out and pull-in cord – poor lubrication in shearing plant – incorrectly adjusted handpiece including: <ul style="list-style-type: none"> ▪ post setting ▪ drag ▪ elbow guards ▪ rug ▪ lead between comb and cutter ▪ wear and thickness of combs and cutters ▪ grinding methods used on combs and cutters – double-ended grinder <ul style="list-style-type: none"> ▪ condition of emery papers ▪ adjustment of pendulum ▪ grinding guards

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			<ul style="list-style-type: none"> ▪ guards around grinding station ▪ availability and condition of safety glasses • workplace hazards <ul style="list-style-type: none"> – electrical – noise – dust • personal hygiene <ul style="list-style-type: none"> – provision of toilet, eating, rest area and washing facilities • sheep diseases <ul style="list-style-type: none"> – fly strike – cheesy gland • sheep behaviour affecting shearers safety • personal fitness of shearers • suitable meal and rest breaks in accordance with award agreements. <p>Reporting to wool classer and shed manager including:</p> <ul style="list-style-type: none"> • verbal communication • written communication.
	<p>1.2 Shearing equipment is checked for correct operation.</p>	<p>What may be included in equipment?</p> <p>Equipment may include friction cone, downtube assembly and shearing handpiece</p>	<p>Learning experiences for the HSC must address:</p> <p>Knowledge of a range of shearing equipment and its function including:</p> <ul style="list-style-type: none"> • shearing handpieces <ul style="list-style-type: none"> – comb – cutter – chicken feet – post – tension nut – rug – ball and race – drive cogs – bayonet drive – screw drive – ferrule – lubrication points • down tube <ul style="list-style-type: none"> – short gut – long gut – safety clutch

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			<ul style="list-style-type: none"> - drive cogs - elbow guards - friction cone • overhead gear <ul style="list-style-type: none"> - shaft-driven - electric • double-ended grinder <ul style="list-style-type: none"> - pendulum - pendulum arm - fine emery - coarse emery - emery clamp plate • oil pot • screw driver • scrubbing brush • water bowl • shearing harness • moccasins. <p>Correct operation of shearing equipment including:</p> <ul style="list-style-type: none"> • lubrication • replacement of damaged components • maintaining a supply of commonly required spare parts • adjustment of centre post in handpiece • wear and poor grinding on combs and cutters • pendulum and pendulum arm adjustments for grinding • correct installation of guards and covers.
	<p>1.3 Assemble comb and cutter on handpiece.</p>		<p>Learning experiences for the HSC must address:</p> <p>Knowledge of set up procedures for a handpiece including:</p> <ul style="list-style-type: none"> • matching combs and cutters • setting appropriate lead, throw and tension on combs and cutters • recognising when combs and cutters are blunt and need sharpening. <p>Awareness of the implication of incorrectly set combs and cutters including:</p> <ul style="list-style-type: none"> • overheating of the handpiece • jamming of handpiece and violent rotation when pulled into gear

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			<ul style="list-style-type: none"> poor cutting of wool injury to sheep.
	1.4 Set lead and throw.	<p>What may be included in equipment?</p> <p>Equipment may include friction cone, downtube assembly and shearing handpiece.</p> <p>What OHS requirements may be applicable to this standard?</p> <p>Safe systems and procedures for:</p> <ul style="list-style-type: none"> safe operation and maintenance of machinery and equipment including guarding of exposed moving parts the operation and maintenance of hazard-free facilities and equipment the maintenance of accommodation facilities handling livestock safe manual handling, including lifting and carrying safe fleece/wool harvesting the protection from electrical hazards, hazardous noise and organic and other dusts the health and safety of shearing personnel the appropriate use of personal protective clothing and equipment animal welfare considerations including disease control. 	<p>Learning experiences for the HSC must address:</p> <p>Knowledge of setting of the lead and throw including:</p> <ul style="list-style-type: none"> ensuring the cutter is correctly located in the chicken feet loosely tightening the comb screws adjusting the comb to achieve desired lead and throw tightening the comb screws. <p>An awareness of the consequences of poorly adjusted lead and throw including:</p> <ul style="list-style-type: none"> poor wool cutting, making the sheep difficult to hold during shearing severe skin cutting during the shearing process, resulting in injury to the sheep. <p>An understanding of the relationship between fleece conditions on sheep and adjustment requirements for lead.</p>
	1.5 Set tension to enable comb and cutter to cut wool cleanly with minimum friction.		<p>Learning experiences for the HSC must address:</p> <p>Procedures for setting the tension including:</p> <ul style="list-style-type: none"> adjusting the tension nut with only thumb and forefinger lubricating the combs making fine adjustments to the tension with the handpiece running listening to the sound made to detect if the tension is too loose feeling the natural rotation of the hand piece in an open hand to detect if it is too tight feeling the heat produced from a handpiece during shearing to detect if the tension too tight or the handpiece needs further adjustments.
	1.6 Lubricate working surfaces and moving parts in line with manufacturers requirements.		<p>Learning experiences for the HSC must address:</p> <p>Lubrication of the handpiece and downtube</p>

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		<p>What OHS requirements may be applicable to this standard?</p> <p>Safe systems and procedures for:</p> <ul style="list-style-type: none"> • safe operation and maintenance of machinery and equipment including guarding of exposed moving parts • the operation and maintenance of hazard-free facilities and equipment • the maintenance of accommodation facilities • handling livestock • safe manual handling, including lifting and carrying • safe fleece/wool harvesting • the protection from electrical hazards, hazardous noise and organic and other dusts • the health and safety of shearing personnel • the appropriate use of personal protective clothing and equipment • animal welfare considerations including disease control. 	<ul style="list-style-type: none"> • safety glasses • appropriate clothing and footwear. <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.
	<p>3.2 Sheep are caught and moved in line with organisational, OHS, industry and animal welfare standards.</p>	<p>What sheep might be subject to the shearing operations?</p> <p>All ages and genders of sheep, including rams, ewes, wethers, lambs, hoggets and stags.</p> <p>What processes might be involved in moving sheep?</p> <p>Sheep may be caught and moved from the catching pen to the board using safe handling techniques.</p> <p>What organisational, industry and animal welfare standards might apply to sheep shearing?</p> <p>Organisation may include: Standard Operating Procedures (SOPs), industry standards, production schedules, work notes, work plans, manufacturers specifications, supervisors instructions, and workplace policies and procedures (including recycling, environmental and land management). Industry and animal welfare standards/requirements might include:</p>	<p>Learning experiences for the HSC must address:</p> <p>Knowledge of the characteristics of a number of different types of sheep including:</p> <ul style="list-style-type: none"> • all ages and genders • rams • ewes • wethers • lambs • hoggets. <p>An awareness of appropriate techniques for catching sheep consistent with industry and welfare standards.</p> <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 (NSW)</i> (as amended) • <i>Prevention of Cruelty to Animals (General) Regulation 1996 (NSW)</i>

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		National codes of practice for the Shearing Industry (Health, Safety and Welfare standards), Environmental Protection Act, and Animal Welfare Act.	<ul style="list-style-type: none"> • 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 the Prevention of Cruelty to Animals (RSPCA) NSW • Animal Welfare League (AWL) NSW • Rural Lands Protection Board.
	3.3 Sheep are moved from the catching pen to the shearing board using safe manual handling techniques.	<p>What OHS requirements may be applicable to this standard?</p> <p>Safe systems and procedures for:</p> <ul style="list-style-type: none"> • safe operation and maintenance of machinery and equipment including guarding of exposed moving parts 	<p>Learning experiences for the HSC must address:</p> <p>Standard manual handling techniques for moving sheep onto the shearing board including:</p> <ul style="list-style-type: none"> • dragging rather than lifting the sheep • keep back straight while dragging sheep.
	3.4 Sheep are positioned for shearing/crutching in line with industry agreed method .	<ul style="list-style-type: none"> • the operation and maintenance of hazard-free facilities and equipment • the maintenance of accommodation facilities • handling livestock • safe manual handling, including lifting and carrying • safe fleece/wool harvesting • the protection from electrical hazards, hazardous noise and organic and other dusts • the health and safety of shearing personnel • the appropriate use of personal protective clothing and equipment • animal welfare considerations including disease control. <p>What range of shearing methods, positions and procedures may be recommended by industry?</p> <p>This may include detailed procedures for removal of wool from the belly and crutch, first hind leg, wig, first side neck and shoulder, side and back (long blow) second side neck and shoulder last side and last hind leg, positioning of the sheep and shearer in relation to the down tube, use of free hand, safety procedures, how to avoid second cuts and other damage to wool, and damage to sensitive and vulnerable parts of the sheep's anatomy.</p>	<p>Learning experiences for the HSC must address:</p> <p>Awareness of shearing and crutching methods including:</p> <ul style="list-style-type: none"> • industry recognised techniques • holding the sheep in the correct position • feet positioning • moving the sheep from one position to another for the whole shearing/crutching process • awareness of fatigue • position of hands and tensioning of the skin to avoid shearing cuts • animal welfare including shearing cuts, poor handling and post-shearing care • avoiding second cuts and other damage to wool • sensitive and vulnerable parts of the sheeps anatomy • tension of combs and cutters • replacement of combs and cutters. <p>Knowledge of appropriate positioning of the sheep and shearer including:</p> <ul style="list-style-type: none"> • position of the downtube • use of free hand • safety procedures.

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4 Remove wool	4.1 Handpiece is activated and positioned readiness for shearing/crutching operations.		
	4.2 Shear/crutch section of sheep as directed.	<p>What sheep might be subject to the shearing operations?</p> <p>All ages and genders of sheep, including rams, ewes, wethers, lambs, hoggets and stags.</p> <p>What organisational, industry and animal welfare standards might apply to sheep shearing?</p> <p>Organisation may include: Standard Operating Procedures (SOPs), industry standards, production schedules, work notes, work plans, manufacturers specifications, supervisors instructions, and workplace policies and procedures (including recycling, environmental and land management). Industry and animal welfare standards/requirements might include: National codes of practice for the Shearing Industry (Health, Safety and Welfare standards), Environmental Protection Act, and Animal Welfare Act.</p> <p>What range of shearing methods, positions and procedures may be recommended by industry?</p> <p>This may include detailed procedures for removal of wool from the belly and crutch, first hind leg, wig, first side neck and shoulder, side and back (long blow) second side neck and shoulder last side and last hind leg, positioning of the sheep and shearer in relation to the down tube, use of free hand, safety procedures, how to avoid second cuts and other damage to wool, and damage to sensitive and vulnerable parts of the sheep's anatomy.</p>	<p>Learning experiences for the HSC must address:</p> <p>An awareness of the influences on the quality of shearing/crutching including:</p> <ul style="list-style-type: none"> • second cuts • skin pieces • contamination with stain, dags and medullated fibres • animal welfare issues associated with severe cuts. <p>Knowledge of the differences in shearing and crutching the following types of sheep:</p> <ul style="list-style-type: none"> • wethers • rams • ewes • lambs • hoggets • pizzle dropped wethers • unmulesed sheep • pregnant ewes • horned and polled sheep • merino and crossbred • plain and wrinkly. <p>An understanding of enterprise procedures for shearing methods including:</p> <ul style="list-style-type: none"> • blows/phases <ul style="list-style-type: none"> – belly to crutch – first hind leg – wig – first side neck and shoulder – long blow (side and back) – second side neck and shoulder last side – last hind leg • crutching types <ul style="list-style-type: none"> – ringing – wiggling – belly blow – binging – full crutch.

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			Shearing and crutching procedures including: <ul style="list-style-type: none"> • Health and safety of shearing personnel • Animal welfare considerations.
	4.3 Release sheep safely from the board into the count-out pens.		

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 with regard to shearing procedures and problems associated with contaminated fleece or problem sheep may be discussed with colleagues and reported to the classer and/or overseer/supervisor.
2. How can information be collected, analysed and organised (1) ?	Shearing outcomes including information with regard to shorn sheep, problem sheep and contaminated wool may be detailed and tallied, and organised by records and reports.
3. How are activities planned and organised (1) ?	Shearing activities may be planned and co-ordinated with time schedules and numbers of sheep, or sequenced as required.
4. How can team work (1) be applied?	Team work may be applied in treating problem sheep or in arranging for the collection of shorn fleece.
5. How can the use of mathematical ideas and techniques (1) be applied?	Mathematics may be applied in the tallying of shorn sheep, mob breaks or cutouts.
6. How can problem-solving skills (1) be applied?	Contingencies for dealing with problem sheep and contaminated wool may be planned and prepared to minimise disruption to shearing schedules. Alternative planning may also be needed if complications occur when catching or shearing sheep.
7. How can the use of technology (1) be applied?	To communicate, record and calculate shearing outcomes and tallies.