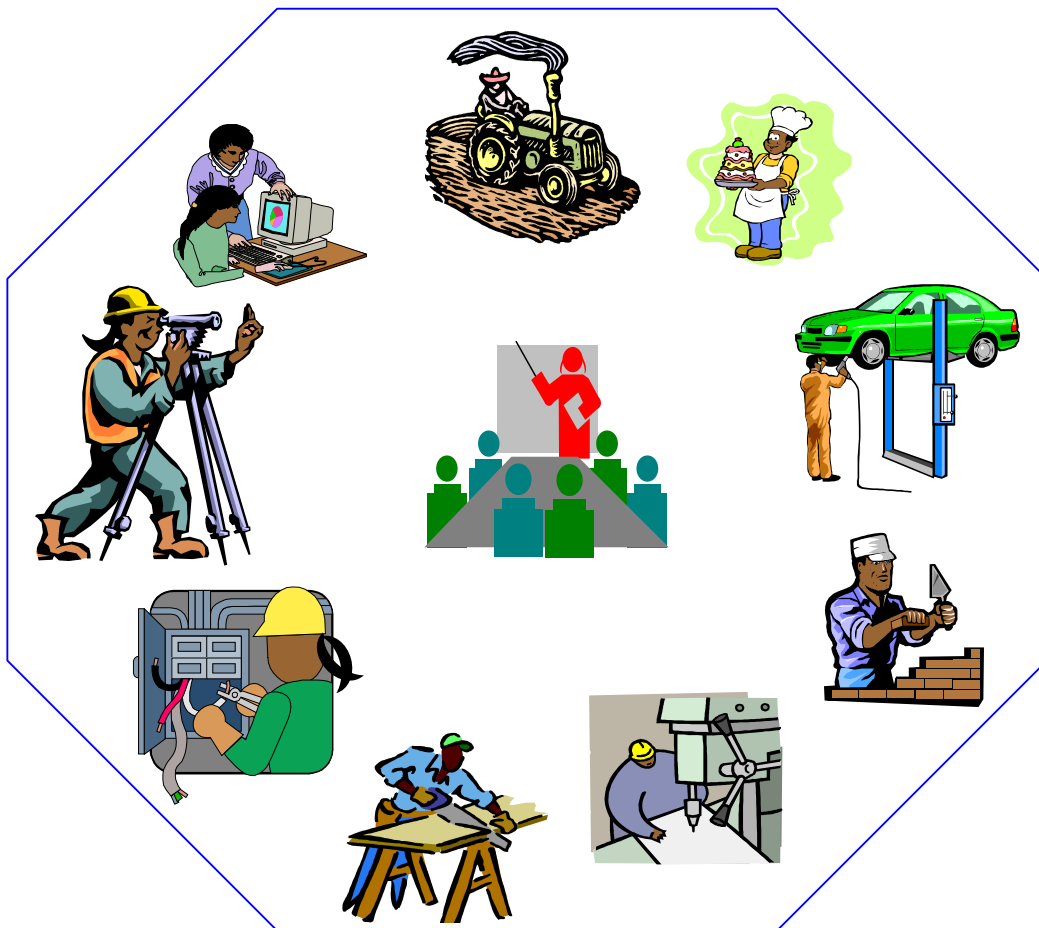




Federal Democratic Republic of Ethiopia
OCCUPATIONAL STANDARD
**FARM MACHINERY AND EQUIPMENT
OPERATION SUPPORT WORK**
NTQF Level I



*Ministry of Education
July 2014*

Introduction

Ethiopia has embarked on a process of reforming its TVET-System. Within the policies and strategies of the Ethiopian Government, technology transformation – by using international standards and international best practices as the basis, and, adopting, adapting and verifying them in the Ethiopian context – is a pivotal element. TVET is given an important role with regard to technology transfer. The new paradigm in the outcome-based TVET system is the orientation at the current and anticipated future demand of the economy and the labour market.

The Ethiopia Occupational Standards (EOS) is the core element of the Ethiopian National TVET-Strategy and an important factor within the context of the National TVET-Qualification Framework (NTQF). They are national Ethiopian standards, which define the occupational requirements and expected outcome related to a specific occupation without taking TVET delivery into account.

This document details the mandatory format, sequencing, wording and layout for the Ethiopia Occupational Standard which comprised of Units of Competence.

A Unit of Competence describes a distinct work activity. It is documented in a standard format that comprises:

- Occupational title and NTQF level
- Unit title
- Unit code
- Unit descriptor
- Elements and Performance criteria
- Variables and Range statement
- Evidence guide

Together all the parts of a Unit of Competence guide the assessor in determining whether the candidate is competent.

The ensuing sections of this EOS document comprise a description of the occupation with all the key components of a Unit of Competence:

- chart with an overview of all Units of Competence for the respective level including the Unit Codes and the Unit Titles
- contents of each Unit of Competence (competence standard)
- occupational map providing the Technical and Vocational Education and Training (TVET) providers with information and important requirements to consider when designing training programs for this standards and for the individual, a career path

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UNIT OF COMPETENCE CHART

Occupational Standard: Farm Machinery and Equipment Operation Support Work

Occupational Code: [AGR FME](#)

NTQF Level I

<p>AGR FME1 01 0714 Follow Basic Chemical Safety Rules</p>	<p>AGR FME1 02 0714 Use Hand and Power Tools/Hand Held Operation</p>	<p>AGR FME1 03 0714 Use and Maintain Basic Measuring Devices</p>
<p>AGR FME1 04 0714 Support Agricultural Crop Work</p>	<p>AGR FME1 05 0714 Assist Agricultural Crop Establishment</p>	<p>AGR FME1 06 0714 Assist Agricultural Crop Maintenance</p>
<p>AGR FME1 07 0714 Assist Agricultural Crop Harvesting</p>	<p>AGR FME1 08 0714 Inspect and Clean Machinery for Plant, Animal and Soil Material</p>	<p>AGR FME1 09 0714 Assist with Routine Maintenance of Machinery and Equipment</p>
<p>AGR FME1 10 0714 Inspect and Replace Tyres</p>	<p>AGR FME1 11 0714 Test, Service and Charge Batteries</p>	<p>AGR FME1 12 0714 Apply Quality Standards</p>
<p>AGR FME1 13 0714 Work with Others</p>	<p>AGR FME1 14 0714 Receive and Respond to Workplace Communication</p>	<p>AGR FME1 15 0714 Demonstrate Work Values</p>
<p>AGR FME1 16 0714 Develop Understanding of Entrepreneurship</p>	<p>AGR FME1 17 0714 Apply 3S</p>	

Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Follow Basic Chemical Safety Rules
Unit Code	AGR FME1 01 0714
Unit Descriptor	This unit covers basic chemical safety rules and defines the standard required to: interpret chemical safety rules; follow safety instructions including handling and storage; use personal protective equipment and communicate information about spillage or accidents. This unit applies to the observance of basic chemical safety rules including those about labels, transport, handling, storage and personal protective equipment.

Elements	Performance Criteria
1. Follow workplace requirements and instructions concerning chemicals	<p>1.1 Workplace information sources are accessed and procedures are strictly adhered.</p> <p>1.2 Roles and responsibilities of people are identified in the workplace.</p> <p>1.3 Safety procedures involved in chemical handling and use are recognised and followed as required.</p> <p>1.4 OHS requirements, including individual regulatory requirements and Personal Protection Equipment (PPE) needs are observed throughout the work and reported to the supervisor.</p> <p>1.5 Organisational procedures are followed with regard to chemicals.</p>
2. Recognise risks associated with chemicals	<p>2.1 Safe operating procedures are observed and noted during the use of tools/ equipment in accordance with workplace guidelines.</p> <p>2.2 Functions of chemicals are recognised in the workplace.</p> <p>2.3 Chemical labels and symbols are recognised and hazards are identified.</p> <p>2.4 Chemical storage locations are identified.</p> <p>2.5 Instructions for transport, handling and storage of chemicals are recognised and observed.</p> <p>2.6 Instructions for use, maintenance and storage of personal protective equipment and application equipment are identified and observed.</p> <p>2.7 Environmental requirements are observed and precautions are implemented according to workplace and environmental protection regulation or guidelines.</p> <p>2.8 Emergency procedures are identified and followed as per organization's guideline.</p>

3. Follow chemical handling and storage rules	<p>3.1 Chemical handling and storage instructions on labels are followed.</p> <p>3.2 Safety rules are followed when working in areas where chemicals are stored.</p> <p>3.3 Appropriate personal protection equipment is obtained and used when working in areas where chemicals are stored.</p> <p>3.4 Procedures are followed in the event of an accident or spillage.</p>
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Variable	Range
Information sources	<p>Sources of information/documents may include:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, Material Safety Data Sheets (MSDS), diagrams and sketches • regulatory/legislative requirements pertaining to automotive and chemical industry • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons • International standards • verbal and graphical instructions and fault reporting and may include site specific instructions, written instructions, plans or instructions related to job/task, telephones and pagers
OHS requirements	<p>Are to be in accordance with applicable legislation and regulations, and organisational safety policies and procedures and may include:</p> <ul style="list-style-type: none"> • personal protective equipment and clothing • workplace environment and safety, safety equipment • enterprise first aid and first aid equipment • hazard and risk control and hazardous materials and substances electrical safety • elimination of hazardous materials and substances • manual handling, including shifting, lifting and carrying • emergency procedures • use of tooling and equipment • handling of material • use of fire fighting Equipment
Personal Protective Equipment (PPE)	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • include that prescribed under legislation/regulations/codes of practice and workplace policies and practices
Safe operating procedures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • operational risk assessment and treatments associated with vehicular movement, toxic substances, electrical safety, machinery movement and operation, manual and mechanical lifting and shifting, • working in proximity to others and site visitors

	<ul style="list-style-type: none"> • emergency shutdown and stopping of Equipment, extinguishing fires, enterprise first aid requirements and site evacuation
Environmental requirements	<p>may include:</p> <ul style="list-style-type: none"> • waste management • pollution • noise • dust • clean-up management
Emergency procedures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation
Safety rules	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • those about labels • transport • handling • storage • personal protective equipment

Evidence Guide

Critical Aspects of Competence	<p>Must demonstrate knowledge and skills competence to:</p> <ul style="list-style-type: none"> • interpret chemical safety rules • follow safety instructions including handling and storage • use personal protective equipment • communicate information about spillage or accidents
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • basic occupational health and safety rules required to work near and around chemicals • level of hazard and the Poisons Schedule • chemicals being used for the control of pests and weeds • personal protection equipment and when and how it should be used, stored and maintained • correct wearing/fit of personal protective equipment • environmental impacts of chemical use • OHS, environmental and pesticides legislation and enterprise procedures
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • interpret labels and instructions • follow workplace instructions and directions from the chemical label or Material Safety Data Sheets (MSDSs) • communicate information about spillages, accidents or deficiencies in procedures and practice • use appropriate Personal Protective Equipment (PPE) • recognise caution or hazard signs and symbols • interpret tasks or information from labels, manuals or written instructions

	<ul style="list-style-type: none"> • record information accurately or verbally report information • use oral communication skills/language competence to communicate effectively with others • use numeracy skills to complete basic calculations • use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds
Resources Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competency may be assessed in the work place or in a simulated work place setting

Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Use Hand and Power Tools/Hand Held Operation
Unit Code	AGR FME1 02 0714
Unit Descriptor	This unit covers using a range of hand tools and hand held power tools and fixed power tools for hand held operations for a variety of general engineering applications. Applications may include hand tools used for adjusting, dismantling, assembling and finishing of items or components, and the shaping, finishing, cutting, scraping and grinding of metallic and non-metallic materials and/or tool bits to size and shape. This includes simple tapping and threading and routine maintenance of hand tools.

Elements	Performance Criteria
1. Use hand tools	<p>1.1 Hand tools appropriate to the task requirements are selected.</p> <p>1.2 Hand tools are used to produce desired outcomes to job specifications which may include finish, tension, size or shape.</p> <p>1.3 All safety requirements are adhered to before, during and after use.</p> <p>1.4 Unsafe or faulty tools are identified and marked for repair according to designated procedures before, during and after use.</p> <p>1.5 Routine maintenance of tools, including hand sharpening is undertaken according to standard operational procedures, principles and techniques.</p> <p>1.6 Hand tools are stored safely in appropriate location according to standard operational procedures and manufacturers' recommendations.</p>
2. Use power tools	<p>2.1 Power tools are selected appropriate to the task requirements.</p> <p>2.2 Power tools are used for a determined sequence of operations which may include clamping, alignment and adjustment to produce desired outcomes and to job specifications which finish, size or shape may be included.</p> <p>2.3 All safety requirements are adhered to before, during and after use.</p> <p>2.4 Unsafe or faulty tools are identified and marked for repair before, during and after use according to designated procedures.</p> <p>2.5 Operational maintenance of tools, including hand</p>

	<p>sharpening is undertaken according to standard workplace procedures, principles and techniques.</p> <p>2.6 Power tools are stored safely in appropriate location according to standard workshop procedures and manufacturers' recommendations.</p>
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Variable	Range
Hand tools	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • hacksaws • hammers • punches • screwdrivers • sockets • wrenches • scrapers • chisels • gouges • wood planes and files of all cross-sectional shapes and types
Job specifications	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • finish, tension, size or shape etc.
Routine maintenance	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • cleaning, lubricating, tightening • simple tool repairs • hand sharpening and adjustments using engineering principles • tools, equipment and procedures
Power tools	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • electric or pneumatic/hydraulic drills • grinders, jigsaws, nibblers, cutting saws • sanders, planers, routers, pedestal drills and pedestal grinders
Clamping	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • multigrips, vices, jigs and fixtures, clamps etc.
Operational maintenance	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • hand sharpening, cleaning, lubricating, tightening • simple tool repairs and adjustments using engineering principles, tools, equipment and procedures to statutory and regulatory requirements

Evidence Guide	
Critical Aspects of Competence	<p>Demonstrate knowledge and skills competence to:</p> <ul style="list-style-type: none"> • apply different hand tools in a general engineering context • identify common fault and our defects in hand tools and power tools • implement procedures for marking unsafe or faulty tools for repair • perform routine maintenance requirements for a range of hand tools and power tools

	<ul style="list-style-type: none"> • apply clamping/securing methods • perform adjustments/alignments to a range of power tools • perform tool sharpening techniques for a range of hand and power tools • describe hazards and control measures associated 		
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • application of different hand tools in a general context • common faults and/or defects in hand tools and power tools • procedures for marking unsafe or faulty tools for repair • routine maintenance requirements for a range of hand tools and power tools • application of different power tools • clamping/securing methods • adjustments/alignments to a range of power tools • procedures for marking unsafe or faulty power tools for repair • tool sharpening techniques for a range of hand tools and power tools • storage location and procedures for a range of hand and power tools • hazards and control measures associated with using hand tools and power tools • use and application of personal protective equipment • safe work practices and procedures 		
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • reading and following information on standard operating procedures • following verbal instructions • selecting hand tools and /or power tools appropriate to the task • using hand tools and /or power tools safely • identifying hand tool and /or power tool defects and marking for repair • maintaining/sharpening hand tools and /or power tools using appropriate techniques • using clamping/securing devices • storing hand tools in accordance with manufacturers'/standard operating procedures • sharpening tools/tool bits within the scope of this unit • storing power tools according to manufacturers'/ standard operating procedures 		
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.		
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning 		
Context of Assessment	Competency may be assessed in the work place or in a simulated work place setting		
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Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Use and Maintain Basic Measuring Devices
Unit Code	AGR FME1 03 0714
Unit Descriptor	This unit covers the competence required to use and maintain measuring equipment used in general repair and of a basic nature. The unit includes identification and confirmation of work requirement, preparation for work, conduct of measurements, analysis and documenting of outcomes, maintenance of equipment and the completion of work finalisation processes, including clean-up and documentation. Work involved includes measurement of length, width, squareness, flatness and depth, using imperial and metric measurement.

Elements	Performance Criteria
1. Prepare to undertake measurements	<p>1.1 Compliance documentation relevant to the work activity is accessed, interpreted and applied.</p> <p>1.2 OHS requirements including regulatory requirements and personal protective equipment needs are observed throughout the work.</p> <p>1.3 Procedures and information such as workshop manuals and specifications and tooling are sourced as required.</p> <p>1.4 Method options are analysed and those most appropriate to the circumstances are selected and prepared.</p> <p>1.5 Technical and/or calibration requirements are sourced for measuring equipment and support equipment is identified and prepared.</p> <p>1.6 Warnings are observed in relation to working with precision tooling.</p> <p>1.7 Measuring and calculating equipment are selected and checked to carry out tasks that are consistent with the requirements of the job for serviceability and any faults and rectified or faults are reported.</p> <p>1.8 Correct and safe use of the repair equipment is demonstrated prior to work undertaken.</p>
2. Conduct measurements and analyse results	<p>2.1 Work instructions/information are confirmed and strictly applied.</p> <p>2.2 Methods are implemented for the conduct of measurements in accordance with workplace procedures and manufacturer/component supplier specifications.</p> <p>2.3 Measurements are obtained using a rule or tape, accurate to 1cm.</p>

	<p>2.4 Measurement results are compared with manufacturer/ component supplier specifications to indicate compliance or non-compliance.</p> <p>2.5 Results are documented with evidence and supporting information and recommendation(s) is/are made</p> <p>2.6 Report is processed in accordance with workplace procedures.</p>
3. Estimate approximate quantities	<p>3.1 Calculations are done for determining material requirements.</p> <p>3.2 Appropriate formulas/ factors are selected for calculating material quantities.</p> <p>3.3 Quantities are estimated from the calculations taken based on standardized procedures.</p> <p>3.4 Material quantities for the project are calculated, confirmed and recorded within enterprise tolerances.</p>
4. Maintain measuring equipment	<p>4.1 Information required for maintenance is accessed from manufacturer/component supplier specifications and correctly interpreted</p> <p>4.2 Routine maintenance and storage of measuring equipment are carried out in accordance with manufacturer/component supplier specifications</p> <p>4.3 Checks are completed without causing damage to component or system</p> <p>4.4 Workplace documents are processed and communicated in accordance with workplace procedures</p>

Variable	Range
Compliance documentation	<p>May include:</p> <ul style="list-style-type: none"> legislative, organisational and site requirements and procedures manufacturer's guidelines and specifications code of practice employment and workplace relations legislation
OHS requirements	<p>Are to be in accordance with legislation/ regulations/codes of practice and enterprise safety policies and procedures. This may include:</p> <ul style="list-style-type: none"> protective clothing and equipment use of tooling and equipment workplace environment and safety handling of material use of fire fighting equipment enterprise first aid hazard control and hazardous materials and substances
Personal protective equipment	<p>May include:</p> <ul style="list-style-type: none"> that prescribed under legislation/regulations/codes of practice and workplace policies and practices

Measuring equipment	<p>May include:</p> <ul style="list-style-type: none"> • split levels • depth gauges • steel rulers • tape measures • T-squares and straight edges
Information	<p>may include:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets diagrams or sketches • safe work procedures related to the use and maintenance of measuring equipment • regulatory/legislative requirements pertaining to the automotive industry, including Environment Protection Regulations (Diesel Fuels), • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons
Measurement	<p>May include the determination of:</p> <ul style="list-style-type: none"> • length, area, weight, height • width, depth • volume, mass, scales • perimeters, quantities • numbers, grade
Calculations	<p>May be performed manually and with the aid of a calculator and may include:</p> <ul style="list-style-type: none"> • addition, subtraction, multiplication and division • length, perimeter, circumference, area, volume, number, ratio, percentage • conversions, such as of metres to millimetres and millimetres to metres
Communicating	<p>Are to include but are not limited to:</p> <ul style="list-style-type: none"> • verbal and visual instructions and fault reporting and may include: • site specific instructions, • written instructions, • plans or instructions related to job/task, • telephones and pagers

Evidence Guide

Critical Aspects of Competence	<p>Must demonstrate knowledge and skills competence in:</p> <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • measuring dimensions • maintaining measuring equipment 		
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	<ul style="list-style-type: none"> conducting measurement in accordance with workplace requirements accurately interpreting measurements completing measurements within workplace timeframes
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> OHS regulations/requirements, equipment, material and personal safety requirements common automotive measurement terminology types of non-specialist measuring equipment and their applications measurement procedures measuring equipment maintenance procedures enterprise quality procedures work organisation and planning processes
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> apply research and interpretive skills sufficient to locate, interpret and apply manufacturer/component supplier procedures, workplace policies and procedures apply analytical skills required for identification and analysis of technical information apply planning and organising skills to own work activities, including making good use of time and resources, sorting out priorities and monitoring one's own performance interact effectively with other persons both on a one-to-one basis and in groups, including understanding and responding to the needs of a customer and working effectively as a member of a team to achieve a shared goal establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise reworking and avoid wastage use mathematical ideas and techniques to correctly calculate time, assess tolerances, apply accurate measurements, calculate material requirements and establish quality checks use workplace technology related to the use and maintenance of measuring equipment, computerised technology and communication devices and the reporting/documenting of results
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> Interview / Written Test Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Support Agricultural Crop Work
Unit Code	AGR FME1 04 0714
Unit Descriptor	This unit covers supporting agricultural crop work and defines the standard required to: prepare tools and equipment; undertake crop support activities; handle basic materials and equipment, and clean up after work activities.

Elements	Performance Criteria
1. Prepare materials, tools and equipment for agricultural crop work	<p>1.1 The required materials, tools and equipment to work tasks are identified according to lists provided and/or supervisor's instructions.</p> <p>1.2 Checks are conducted on all materials, tools and equipment with insufficient or faulty items reported to the supervisor.</p> <p>1.3 Techniques are used when loading and unloading materials, correct manual handling is demonstrated and damage to the load and the vehicle minimised.</p> <p>1.4 Suitable Personal Protective Equipment (PPE) is selected and checked prior to use.</p> <p>1.5 Cropping support is provided according to Occupational Health and Safety (OHS) requirements and workplace information.</p> <p>1.6 OHS hazards are identified and reported to the supervisor.</p>
2. Undertake agricultural crop work as directed	<p>2.1 Instructions and directions provided by supervisor are followed and clarification is sought when necessary.</p> <p>2.2 Cropping work is undertaken in a safe and environmentally appropriate manner according to enterprise guidelines.</p> <p>2.3 Interactions are carried out with other staff and customers in a positive and professional manner.</p> <p>2.4 Enterprise policy and procedures are observed in relation to workplace practices, handling and disposal of materials.</p> <p>2.5 Problems or difficulties in completing work to required standards or timelines are reported to supervisor.</p>
3. Handle materials and equipment	<p>3.1 Waste material produced during cropping work is stored in a designated area according to supervisor's instructions.</p> <p>3.2 Materials, equipment and machinery are handled and transported according to supervisor's instructions and enterprise guidelines.</p> <p>3.3 A clean and safe work site is maintained while completing cropping activities.</p>

4. Clean up on completion of cropping work	<p>4.1 Materials are returned to store or disposed of according to supervisor's instructions.</p> <p>4.2 Tools and equipment are cleaned, maintained and stored according to manufacturer's specifications and supervisor's instructions.</p> <p>4.3 Work outcomes are reported to the supervisor.</p>
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Variable	Range
Materials	may include: <ul style="list-style-type: none"> • cleaning material
Tools and equipment	may include: <ul style="list-style-type: none"> • hand tooling and hand held power tooling
Work tasks	May include: <ul style="list-style-type: none"> • assistance with all activities associated with cropping such as: <ul style="list-style-type: none"> ➤ land preparation ➤ seeding ➤ fertilising ➤ harvesting ➤ baling ➤ raking ➤ loading ➤ removing weeds (rouging) or rocks from crops or fields • routine maintenance of sheds and other workplaces
Personal Protective Equipment	May include but not limited to: <ul style="list-style-type: none"> • Personal protective equipment is to include that prescribed under legislation/regulations/codes of practice and workplace policies and practices
Occupational Health and Safety (OHS) requirements	Are to be in accordance with applicable legislation and regulations, and organisational safety policies and procedures and may include: <ul style="list-style-type: none"> • personal protective equipment and clothing • workplace environment and safety, safety equipment • enterprise first aid and first aid equipment • hazard and risk control and hazardous materials and substances electrical safety • elimination of hazardous materials and substances • manual handling, including shifting, lifting and carrying • emergency procedures • use of tooling and equipment • handling of material • use of fire fighting equipment
Enterprise policies and procedures	May include: <ul style="list-style-type: none"> • quality policies and procedures, including Relevant Ethiopian standards • OHS, sustainability, environment, equal opportunity and anti-discrimination

	<ul style="list-style-type: none"> • manufacturer specifications and industry codes of practice • safe work procedures • reporting and recording procedures
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Evidence Guide	
Critical Aspects for competence	Must demonstrate knowledge and skills competence to: <ul style="list-style-type: none"> • prepare tools and equipment • undertake crop support activities • handle basic materials and equipment • clean up after work activities
Underpinning Knowledge and Attitudes	Demonstrate knowledge of: <ul style="list-style-type: none"> • preparing tools and equipment
Underpinning Skills	Demonstrate skills to <ul style="list-style-type: none"> • undertake crop support activities
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Assist Agricultural Crop Establishment
Unit Code	AGR FME1 05 0714
Unit Descriptor	This unit covers the process of applying assistance to others in preparing for agricultural crop establishment and defines the standard required to: carry out ground preparation of the area for planting; apply pre-planting soil treatments; calibrate the planting equipment; plant seed; apply fertiliser with seed at sowing or as a separate operation; apply herbicides under supervision; record all details of sowing. This unit applies to working under close supervision with regular checking. Competence at this level requires the application of limited knowledge and skills to a range of agricultural crop establishment tasks, including assistance with machinery preparation. The work undertaken is usually within established routines, methods and procedures.

Elements	Performance Criteria
1. Prepare for agricultural crop establishment operations	<p>1.1 Instructions about planting are interpreted and clarified with the supervisor.</p> <p>1.2 Machinery, equipment and tools are prepared for the task being undertaken.</p> <p>1.3 Occupational Health and Safety (OHS) hazards are identified; risks are assessed and reported to the supervisor.</p> <p>1.4 The environmental implications/requirements of the agricultural crop production plan are identified</p> <p>1.5 Suitable personal protective equipment is selected, used and maintained.</p>
2. Prepare the site for crop establishment	<p>2.1 Old crop and other waste materials are removed and disposed of in full consideration of environmental implications.</p> <p>2.2 Soil treatment/amendments are applied according to soil test results and the supervisor's instructions.</p> <p>2.3 Site is worked according to the crop production plan.</p> <p>2.4 Crop protection is implemented according to enterprise guidelines.</p> <p>2.5 The planting pattern is marked out according to the crop production plan.</p> <p>2.6 Machinery, equipment and tools are operated according to enterprise guidelines.</p>
3. Carry out establishment	<p>3.1 Planting material is handled and transported to the site with no signs of transport damage.</p>

operations	3.2 Planting is carried out according to the planting plan.
4. Complete establishment operation	<p>4.1 Tools and equipment are cleaned and sterilised according to the manufacturer's specifications, enterprise procedures and regulations.</p> <p>4.2 All containers, leftover fluids, waste and debris are disposed of safely and appropriately.</p> <p>4.3 All required workplace records are completed accurately and promptly in accordance with enterprise requirements.</p>

Variable	Range
Machinery	<p>May include</p> <ul style="list-style-type: none"> • tractors • organic or soil amendment spreaders
Equipment and tools	<p>May include:</p> <ul style="list-style-type: none"> • tillage implements(ploughs, riggers, harrows) • planting implements • spraying equipment • lubricating equipment • tool box set
Occupational Health and Safety (OHS) hazards	<p>Unsafe situations may include, but are not limited to:</p> <ul style="list-style-type: none"> • sharp cutting tooling and instruments, • stumps and logs in the soil or covered by debris • torn or improper use personal protective equipments • worn out repair tools • servicing while engine is running • working under machines not secured • unprotected moveable parts • electricity and water, • toxic substances, • damaged packing material or containers, • broken or damaged equipment, • flammable materials and fire hazards, • lifting practices, • spillages, waste and debris especially on floors
Environmental implications/requirements	<p>may include:</p> <ul style="list-style-type: none"> • waste management • pollution • dust • clean-up management
Agricultural crops	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • wheat, hay, barley, oats, rice, triticales • maize • millet • peas- chickpeas, pigeon peas • cotton • beans- faba beans, soybean, haricot beans

	<ul style="list-style-type: none"> • lucerne lupins • sorghum • sugar • sunflower • other crops grown as part of a broadacre mixed farming enterprise not specifically named as horticultural crops
Waste materials	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • chemicals and leftover fertilizers and seeds • stocks and debris • containers • leftover fluids
Soil treatment/ amendments	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • organic materials application (compost, cane cake) • liming • fumigation • ripping
Crop protection	<p>May include:</p> <ul style="list-style-type: none"> • insecticides, and herbicide application • cultivation for weed control
Planting material	<p>May include:</p> <ul style="list-style-type: none"> • seeds • cuttings • tubers

Evidence Guide

Critical Aspects of Competence	<p>Demonstrate knowledge and skills competence to:</p> <ul style="list-style-type: none"> • carry out ground preparation of the area for planting • apply pre-planting soil treatments • calibrate the planting equipment • plant seed • apply fertiliser with seed at sowing or as a separate operation • apply weedicide or herbicides under supervision • record all details of sowing
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • importance of field hygiene and quality control in regard to crop establishment • operations of a range of crop establishment machinery • the importance of correct timing and procedures for crop planting • range of pre-planting soil treatments and their importance • methods of waste disposal causing minimal impact on the environment • OHS and environmental impacts of establishing crops.
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • identify hazards and follow safety directions • participate in teams and contribute to team objectives • communicate with team members and supervisor

	<ul style="list-style-type: none"> • read and interpret a range of workplace information • calibrate equipment • measure quantities of treatment • determine spacing and planting patterns • operate machinery to manufacturers specifications and enterprise procedures • safely apply appropriate agricultural chemicals • use literacy skills to follow sequenced written instructions and record information accurately and legibly • use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor • use numeracy skills to estimate, calculate and record routine workplace measures • use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competency may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Assist Agricultural Crop Maintenance
Unit Code	AGR FME1 06 0714
Unit Descriptor	This unit covers the process of providing assistance to others in maintaining agricultural crops and defines the standard required to: prepare machinery, equipment and tools to maintain crops; assist with cropping duties including weed control, pest and disease control, crop nutrition and field maintenance; record the details of crop maintenance machinery operation. This unit applies to working under routine supervision with intermittent checking. The work undertaken is usually within established routines, methods and procedures.

Elements	Performance Criteria
1. Prepare for agricultural crop maintenance operations	<p>1.1 Instructions about agricultural crop maintenance activities are interpreted and clarified with the supervisor.</p> <p>1.2 Machinery, equipment and tools are selected and prepared for the task being undertaken.</p> <p>1.3 Occupational Health and Safety (OHS) hazards are identified; risks are assessed and reported to the supervisor.</p> <p>1.4 The environmental implications of the agricultural crop maintenance plan are identified and discussed with the supervisor.</p> <p>1.5 Environmental implications/requirements are observed and precautions implemented according to workplace and environmental protection regulation or guidelines</p> <p>1.6 Suitable personal protective equipment is selected, used and maintained.</p>
2. Prepare for crop maintenance operations	<p>2.1 Machinery and equipment are fuelled and routine checks made for oil levels, tyre pressures, water levels and greasing points.</p> <p>2.2 Instructions concerning location of the day's work, special operating instructions or work procedures are received.</p>
3. Carry out crop maintenance operations	<p>3.1 Assistance is provided with the crop weed control program.</p> <p>3.2 Assistance is provided with the crop pest and disease control program.</p> <p>3.3 Assistance is provided with the crop nutrition program.</p> <p>3.4 Assistance is provided with field maintenance duties.</p> <p>3.5 Assistance is provided with irrigation duties where appropriate.</p>

4. Complete maintenance operation	<p>4.1 Tools and equipment are cleaned and sterilised according to the manufacturer's specifications, enterprise procedures and regulations.</p> <p>4.2 All containers, leftover fluids, waste and debris are disposed of safely and appropriately in accordance with enterprise requirements.</p> <p>4.3 All required workplace records are completed accurately and promptly in accordance with enterprise requirements.</p>
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Variable	Range
Agricultural crops	<p>May include:</p> <ul style="list-style-type: none"> • wheat, hay, barley, oats, rice, triticale • millet • peas-chickpeas, pigeon peas • beans- faba beans, soybean, horse beans, haricot beans • cotton • lupins • maize • sorghum • sugar • oil crops-sunflower, safflower, lentil, sesame, Niger seed • other crops grown as part of mixed farming enterprise not specifically named as horticultural crops
Crop maintenance activities	<p>May include:</p> <ul style="list-style-type: none"> • soil preparation • weed and pest control • crop nutrition • irrigation • sowing
Machinery	<p>May include:</p> <ul style="list-style-type: none"> • tractors, organic matter spreaders
Equipment and tools	<p>May include:</p> <ul style="list-style-type: none"> • hand tooling, power tooling, specialised equipment such as buffs, spreaders, tyre removal equipment, immersion tanks and various repair material • cultivators, sprayers, fertilizer equipment, spreaders
Occupational Health and Safety (OHS) hazards	<p>May result from but not limited to:</p> <ul style="list-style-type: none"> • unprotected moveable parts • Stumps and logs in the soil or covered by debris • torn or improper use personal protective equipments • worn out repair tools • sharp cutting tooling and instruments • electricity and water • toxic substances • damaged packing material or containers • broken or damaged Equipment

	<ul style="list-style-type: none"> • flammable materials and fire hazards • lifting practices • spillages, waste and debris especially on floors
Environmental implications/requirements	<p>may include:</p> <ul style="list-style-type: none"> • waste management • pollution • noise • dust • clean-up management • protective clothing and equipment • use of tooling and equipment • workplace environment and safety • handling of material • use of fire fighting equipment • enterprise first aid • hazard control and hazardous materials and substances
Personal protective equipment	include that prescribed under legislation/regulations/codes of practice and workplace policies and practices

Evidence Guide	
Critical Aspects of Competence	<p>Must demonstrate knowledge and skills competence to:</p> <ul style="list-style-type: none"> • prepare machinery, equipment and tools to maintain crops • assist with cropping duties including weed control, pest and disease control, crop nutrition and paddock maintenance • report the presence of weeds, pests and disease in crops • record the details of crop maintenance
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • operations of a range of cropping machinery • the importance of correct timing and procedures for crop maintenance • weed control in crops • pest and disease control • crop nutrition • environmental impacts of crop maintenance • methods of waste disposal causing minimal impact on the environment
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • identify hazards and follow safety directions at work • participate in teams and contribute to team objectives • communicate with team members and supervisor • read and interpret a range of workplace information • calibrate equipment • measure quantities of treatment • operate machinery to manufacturer's specifications and enterprise procedures • safely apply appropriate agricultural chemicals • use literacy skills to follow sequenced written instructions

	<p>and record information accurately and legibly</p> <ul style="list-style-type: none"> • use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor • use numeracy skills to estimate, calculate and record routine workplace measures • use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Assist Agricultural Crop Harvesting
Unit Code	AGR FME1 07 0714
Unit Descriptor	This unit covers the assistance provided to others in harvesting agricultural crops and defines the standard required to: prepare harvesting machinery and equipment to harvest crops; operate vehicles and machinery safely and as directed to support the harvesting team; carry out routine checks and refuelling of harvesting vehicles and machinery; dispose of waste liquids and harvest debris according to environmental procedures and record information as requested. This unit applies to working under routine supervision with intermittent checking. The work undertaken is usually within established routines, methods and procedures.

Elements	Performance Criteria
1. Prepare for agricultural crop harvesting operations	<p>1.1 Instructions/information about agricultural crop harvesting activities are interpreted and clarified with the supervisor.</p> <p>1.2 Machinery, equipment and tools are selected and prepared for the task being undertaken.</p> <p>1.3 Occupational Health and Safety (OHS) hazards are identified, risks assessed and reported to the supervisor.</p> <p>1.4 Suitable Personal Protective Equipment (PPE) is selected, used and maintained.</p>
2. Prepare harvesting machinery for crop harvesting operations	<p>2.1 Harvesting machinery is fuelled and routine checks are made for oil levels, tyre pressures, and water levels and greasing points.</p> <p>2.2 Instructions concerning location of the day's harvesting program, special operating instructions or work procedures are received.</p>
3. Complete harvesting operation	<p>3.1 Harvesting machinery and vehicles are cleaned according to enterprise procedures and the manufacturer's specifications.</p> <p>3.2 All containers, leftover fluids, waste and harvest debris is disposed of safely and appropriately.</p> <p>3.3 All required workplace records are completed accurately and promptly in accordance with enterprise requirements.</p>

Variable	Range
Information	<p>Sources of information/documents may include:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions, signage, work

	<p>schedules/plans/specifications, work bulletins, memos, material safety data sheets, diagrams or sketches</p> <ul style="list-style-type: none"> • safe work procedures related to harvesting and threshing machineries • regulatory/legislative requirements pertaining to the farm machinery operation • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons
Agricultural crops	<p>May include:</p> <ul style="list-style-type: none"> • wheat, hay, barley, oats, rice, triticale • millet • peas-chickpeas, pigeon peas • beans- faba beans, soybean, haricot beans • cotton • lucerne • lupins • maize • sorghum • sugar • sunflower, safflower, Niger seed, flax, • other crops grown as part of a mixed farming enterprise not specifically named as horticultural crops
Machinery	<p>May include:</p> <ul style="list-style-type: none"> • tractors, combine harvesters, threshing machines, shellers
Equipment and tools	<p>May include:</p> <ul style="list-style-type: none"> • hand tooling, power tooling, specialised equipment, tyre removal equipment, various repair material, repair tool set • trailers, trucks
Occupational Health and Safety (OHS) hazards	<p>May result from but not limited to:</p> <ul style="list-style-type: none"> • stumps and logs in the soil or covered by debris • torn or improper use personal protective equipments • worn out repair tools • servicing while engine is running • working under machines not secured • unprotected moveable parts • sharp cutting tooling and instruments • electricity and water • toxic substances • damaged packing material or containers • broken or damaged equipment • flammable materials and fire hazards • lifting practices • spillages, waste and debris especially on floors
Personal Protective Equipment (PPE)	<p>May include:</p> <ul style="list-style-type: none"> • Personal protective equipment is to include that prescribed under legislation/regulations/codes of practice and

	workplace policies and practices
Enterprise requirements	<p>may include:</p> <ul style="list-style-type: none"> • waste management • pollution • noise • dust • clean-up management • protective clothing and equipment • use of tooling and equipment • workplace environment and safety • handling of material • use of fire fighting equipment • enterprise first aid • hazard control and hazardous materials and substances

Evidence Guide	
Critical Aspects of Competence	<p>Must demonstrate knowledge and skills competence to:</p> <ul style="list-style-type: none"> • prepare harvesting machinery and equipment to harvest crops • operate vehicles and machinery safely and as directed to support the harvesting team • carry out routine checks and refuelling of harvesting vehicles and machinery • dispose of waste liquids and harvest debris according to environmental procedures • record information as requested
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • harvesting machinery and equipment basic maintenance • harvesting machinery and equipment servicing • hazard identification and safe work practices in harvesting • types of crops and their characteristics • crop hygiene requirements • OHS requirements • environmental impacts and procedures for crop harvesting
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • identify hazards and follow safety directions • participate in teams and contribute to team objectives • read and interpret a range of workplace information • calibrate equipment • measure quantities of treatment • operate machinery to manufacturer's specifications and enterprise procedures • use literacy skills to follow sequenced written instructions and record information accurately and legibly • use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and

	seeking advice from supervisor <ul style="list-style-type: none"> • use numeracy skills to estimate, calculate and record routine workplace measures • use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Inspect and Clean Machinery for Plant, Animal and Soil Material
Unit Code	AGR FME1 08 0714
Unit Descriptor	This unit covers the process of inspecting and cleaning machinery of material that may contribute to the spread of weeds, pests or diseases and defines the standard required to: examine areas on machinery and equipment according to legislation or operating procedures. This unit applies to farm workers who are responsible for inspecting and cleaning machinery that is being moved from one location to another to ensure that soil borne pathogens and weeds are not relocated to new sites. It is carried out under routine supervision within enterprise guidelines.

Elements	Performance Criteria
1. Check machinery and support equipment	<p>1.1 Machinery and equipment are checked for contamination according to written guidelines and legislative requirements.</p> <p>1.2 Machinery and support equipment are made safe for checking, supported safely with free moving parts pinned or supported as required.</p> <p>1.3 Covers and guards are removed safely.</p> <p>1.4 All points identified in legislation or operating procedures are identified and inspected for contamination.</p>
2. Clean machinery and equipment	<p>2.1 Machinery is made safe for cleaning, supported safely with free moving parts pinned or supported as required.</p> <p>2.2 Correct equipment is selected for cleaning.</p> <p>2.3 Points listed are cleaned and checked in appropriate regulations, checklists or enterprise procedures.</p> <p>2.4 Guards are replaced safely and checked.</p> <p>2.5 Areas on other equipment that likely to accumulate contaminants are identified, inspected and cleaned.</p>
3. Complete cleaning work	<p>3.1 Waste materials are disposed of according to enterprise operating procedures and relevant legislative requirements.</p> <p>3.2 Records of cleaning are recorded on appropriate forms according to enterprise policy and procedures.</p>

Variable	Range
Machinery and equipment	May include: <ul style="list-style-type: none"> any other machinery used for agricultural, horticultural or

	<p>earthmoving purposes</p> <ul style="list-style-type: none"> • ancillary equipment such as tillage and planting implements, trailers, bins and augers
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Evidence Guide	
Critical Aspects of Competence	<p>Must demonstrate knowledge and skills competence to:</p> <ul style="list-style-type: none"> • list weeds and diseases that can be borne in plant, animal and soil material • examine areas on machinery and equipment according to legislation or operating procedures • report any issues that pose an infection risk • dispose of waste and infected material or weeds
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • machinery and equipment operating features • major components of machinery and equipment • inspection points and procedures required by legislation • vectors for spread of weeds, pests or diseases • Occupational Health and Safety (OHS), environment and pest management legislative and enterprise requirements
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • identify hazards and adopt safe work practices • inspect machinery and support vehicles • dispose of waste materials • report inspection results • use literacy skills to follow sequenced written instructions and record information accurately and legibly • use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification and seeking advice from supervisor • use numeracy skills to estimate, calculate and record routine workplace measures • use interpersonal skills to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities
Resource Implications	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Assist with Routine Maintenance of Machinery and Equipment
Unit Code	AGR FME1 09 0714
Unit Descriptor	This unit covers assisting with routine maintenance of machinery and equipment, and defines the standard required to: observe machinery and equipment to identify any faults; carry out basic repairs; complete work records and cleanup work area. This unit applies to the provision of support to others undertaking maintenance on small engine machinery including hand tools and equipment.

Elements	Performance Criteria
1. Prepare for basic routine maintenance	<p>1.1 Tools and supplies required to carry out basic routine maintenance tasks are identified, selected and provided on site according to supervisor's instructions.</p> <p>1.2 Routine pre-operational checks of machinery and equipment are carried out and adjustments made according to manufacturers specifications and/or enterprise policies and procedures.</p> <p>1.3 Faulty or unsafe machinery and equipment are identified and segregated for repair or replacement according to enterprise requirements.</p> <p>1.4 Occupational Health and Safety (OHS) hazards in the workplace are identified and reported to the supervisor.</p>
2. Carry out basic routine maintenance	<p>2.1 Suitable personal protective equipment is stored, selected, used and maintained according to OHS requirements.</p> <p>2.2 Greasing, lubrication and other basic servicing of machinery and equipment are carried out according to operator's manual/manufacturer's specifications and supervisor's instructions.</p> <p>2.3 Routine adjustments and repairs are made to machinery and equipment according to operator manual/manufacturer's specifications and supervisor's instructions.</p> <p>2.4 Work is conducted according to OHS requirements and completed to supervisor's satisfaction.</p>
3. Complete basic routine maintenance activities	<p>3.1 Tools are cleaned, returned to operating order and stored according to manufacturer's specifications and enterprise requirements.</p> <p>3.2 Environmental procedures are followed and waste from</p>

	<p>maintenance activities is collected, treated and disposed or recycled according to enterprise requirements.</p> <p>3.3 Work area is cleaned and maintained according to OHS and enterprise requirements.</p> <p>3.4 Malfunctions, faults, wear or damage to tools are reported to the supervisor according to enterprise requirements.</p>
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Variable	Range
Tools	<p>May include but not limited to:</p> <ul style="list-style-type: none"> greasing and lubricating devices washing tools, maintenance tools (toolset of different sizes and types)
Supplies	<p>May include but not limited to:</p> <ul style="list-style-type: none"> lubricants, spare parts, cleaning materials
Maintenance	<p>May involve:</p> <ul style="list-style-type: none"> small engine machinery including hand tools and equipment
Routine pre-operational checks	<p>May include but not limited to:</p> <ul style="list-style-type: none"> oils and water levels tyre pressure torn and broken parts loose parts(guards, bolts, clamps, belts and chains) lubrication of exposed parts
Machinery	<p>May include but not limited to:</p> <ul style="list-style-type: none"> tractors/wheeled, tracked/ combine harvesters and threshing machines self propelled sprayers self propelled manure spreaders cane harvester pumps generators flour mills
Equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> trailers tillage and planting implements spraying equipment fertilizer spreaders
Enterprise policies and procedures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> quality policies and procedures, including Relevant Ethiopian standards OHS, sustainability, environment, equal opportunity and anti-discrimination manufacturer specifications and industry codes of practice safe work procedures reporting and recording procedures
Occupational Health and Safety (OHS)	<p>May result from but not limited to:</p> <ul style="list-style-type: none"> sharp cutting tooling and instruments,

hazards	<ul style="list-style-type: none"> • Stumps and logs in the soil or covered by debris • Torn or improper use personal protective equipments • Worn out repair tools • Servicing while engine is running • Working under machines not secured • unprotected moveable parts • electricity and water, • toxic substances, • damaged packing material or containers, • broken or damaged Equipment, • flammable materials and fire hazards, • lifting practices, • spillages, waste and debris especially on floors
Personal protective equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • include that prescribed under legislation/regulations/codes of practice and workplace policies and practices
OHS requirements	<p>Are to be in accordance with legislation/ regulations/codes of practice and enterprise safety policies and procedures. This may include:</p> <ul style="list-style-type: none"> • protective clothing and equipment • use of tooling and equipment • workplace environment and safety • handling of material • use of fire fighting equipment • enterprise first aid • hazard control and hazardous materials and substances

Evidence Guide

Critical Aspects of Competence	<p>Must demonstrate knowledge and skills competence to:</p> <ul style="list-style-type: none"> • check machinery and equipment to identify faults • carry out basic repairs • complete work records • clean up work area
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • types, characteristics and functions of machinery and equipment • machinery and equipment checking and operating procedures • types, characteristics and functions of tools used in maintenance of machinery and equipment • OHS legislative requirements • Codes of Practice with regard to the use and control of hazardous substances and/or working in confined spaces • environmental Codes of Practice with regard to maintenance activities and disposal of fuels and oils
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • demonstrate safe and environmentally responsible

	<p>workplace practices</p> <ul style="list-style-type: none"> • read and interpret manufacturers specifications, work and maintenance plans, safety decals and Material Safety Data Sheets (MSDSs) • measure and calculate volumes, consumption and lubrication requirements • use literacy skills to read and follow a range of basic instructions • use oral communication skills/language competence to communicate effectively with others • use numeracy skills to complete basic calculations • use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Inspect and Replace Tyres
Unit Code	AGR FME1 10 0714
Unit Descriptor	The unit covers the competence required for identification and confirmation of work requirement, preparation for work, removal, inspection and fitting of tyres and completion of work finalisation processes, including clean-up and documentation.

Elements	Performance Criteria
1. Prepare to inspect, remove, and fit tyres	<p>1.1 Nature and scope of work requirements are identified and confirmed.</p> <p>1.2 OHS requirements including individual regulatory requirements and personal protection equipment needs are observed throughout the work.</p> <p>1.3 Workplace procedures and information sources are accessed and procedures strictly adhered.</p> <p>1.4 Method options are analysed and those most appropriate to the circumstances are selected and prepared.</p> <p>1.5 Tools and equipment requirements are identified and made ready for use prior to the start of work practice as per job specification and work place procedures.</p> <p>1.6 Technical requirements for inspect, removal, and fitting of tyres and are sourced and support equipment is identified and prepared.</p>
2. Fit tyres	<p>2.1 Methods for the fitting of tyres are implemented in accordance with workplace procedures and manufacturer/component supplier specifications.</p> <p>2.2 Safe operating procedures are observed and noted during the use of tools/ equipment in accordance with workplace guidelines.</p> <p>2.3 Tyre and tube assembly pressure is tested.</p> <p>2.4 Emergency procedures are identified and followed as per organization's guideline.</p>
3. Prepare tyre and tube assembly for use or storage	<p>3.1 Repair documentation is completed.</p> <p>3.2 Final inspection is made to ensure work is to workplace expectations.</p> <p>3.3 Tyre and tube assembly are presented for use or storage to workplace expectations.</p> <p>3.4 Job card is processed in accordance with workplace procedures.</p>

Variable	Range
OHS requirements	<p>Are to be in accordance with legislation/ regulations/codes of practice and enterprise safety policies and procedures. This may include:</p> <ul style="list-style-type: none"> • protective clothing and equipment • use of tooling and equipment • workplace environment and safety • handling of material • use of fire fighting equipment • enterprise first aid • hazard control and hazardous materials and substances
Personal protective equipment	<p>May include but are not limited to:</p> <ul style="list-style-type: none"> • Personal protective equipment is to include that prescribed under legislation/regulations/codes of practice and workplace policies and practices
Information sources	<p>may include:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets, diagrams or sketches • safe work procedures related to the removal, repair and fitting of tubes and tyres (light) • regulatory/legislative requirements pertaining to the automotive industry, • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons
Tooling and equipment	<p>may include:</p> <ul style="list-style-type: none"> • hand tooling, • power tooling, • specialised equipment such as: <ul style="list-style-type: none"> ➤ buffs ➤ spreaders ➤ tyre removal equipment ➤ immersion tanks and various repair material
Tyres	<p>Tyres may include:</p> <ul style="list-style-type: none"> • tube, tubeless • dual sizing • radial • belted bias • directional
Safe operating procedures	<p>May include but are not limited to:</p> <ul style="list-style-type: none"> • the conduct of operational risk assessment and treatments associated with: <ul style="list-style-type: none"> ➤ vehicular movement, ➤ toxic substances, ➤ electrical safety, ➤ machinery movement and operation,

	<ul style="list-style-type: none"> ➤ manual and mechanical lifting and shifting, ➤ working in proximity to others and site visitors
Emergency procedures	<p>May include but are not limited to:</p> <ul style="list-style-type: none"> • emergency shutdown and stopping of equipment • extinguishing fires • enterprise first aid requirements and site evacuation
Quality requirements	<p>are to include, but are not limited to:</p> <ul style="list-style-type: none"> • regulations, including internal company quality policy and standards and enterprise operations and procedures

Evidence Guide	
Critical aspects of Competence	<p>Must demonstrate knowledge and skills competence in:</p> <ul style="list-style-type: none"> • observing safety procedures and requirements • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • conducting the removal, inspection, and fitting of tyres in accordance with workplace and manufacturer/ component supplier requirements • completing the work within workplace timeframes
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • OHS regulations/requirements, equipment, material and personal safety requirements • dangers of working with tyre changing equipment • general knowledge of types of rim and tyre construction, terms and codes • types and layout of service/repair manuals • Inspection, removal, and fitting procedures • enterprise quality procedures • work organisation and planning processes
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • apply interpretive skills sufficient to locate, interpret and apply manufacturer/component supplier procedures, workplace policies and procedures • apply analytical skills required for identification and analysis of technical information • apply planning and organising skills to own work activities, including making good use of time and resources, sorting out priorities and monitoring one's own performance • establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise reworking and avoid wastage • use mathematical ideas and techniques to correctly • calculate time, assess tolerances, apply accurate measurements, calculate material requirements and establish quality checks • use workplace technology related to the removal, inspection

	and fitting of tyres, including the use of measuring equipment, specialist tooling, and communication devices and the reporting/documenting of results
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competency may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Test, Service and Charge Batteries
Unit Code	AGR FME1 10 0714
Unit Descriptor	This unit covers the competence to service, remove, replace and charge machinery batteries. The unit includes identification and confirmation of work requirements, preparation for work, servicing, testing and charging of batteries, jump-starting of machinery/equipment and completion of work finalisation processes, including clean-up and documentation. Competence is applicable to batteries fitted to machinery, plant and equipment.

Elements	Performance Criteria
1. Prepare for work	<p>1.1 Work place information and instructions, including method, process and equipment are used to determine job requirements.</p> <p>1.2 Job specifications are read and interpreted.</p> <p>1.3 OHS requirements including personal safety needs, regulatory requirements and personal protective equipment are observed throughout the work.</p> <p>1.4 Tools and equipment requirements are identified and checked for safe and effective operation prior to the start of work practice as per job specification and work place procedures.</p> <p>1.5 Procedures are determined to minimise task time.</p>
2. Service batteries	<p>2.1 Information is accessed from manufacturer/component supplier specifications and correctly interpreted.</p> <p>2.2 Safe operating procedures are observed and noted during the use of tools/equipment in accordance with workplace guidelines.</p> <p>2.3 Material, components, tooling and equipment are identified, selected and prepared in accordance with site procedures to complete work.</p> <p>2.4 Electrolyte levels are checked and topped up in accordance with site procedures.</p> <p>2.5 Batteries and terminals are cleaned in accordance with site procedures.</p> <p>2.6 Batteries are removed and replaced safely according to site procedures.</p> <p>2.7 Environmental requirements are observed and precautions are implemented according to workplace and</p>

	environmental protection regulation or guidelines.
3. Charge batteries	<p>3.1 Information for charging is accessed from manufacturer/ component supplier specifications and correctly interpreted.</p> <p>3.2 Components, tooling and equipment are identified, selected and prepared in accordance with site procedures to complete work.</p> <p>3.3 Electrolyte levels are checked and topped up in accordance with site procedures.</p> <p>3.4 Batteries are charged in accordance with site procedures and component manufacturer/component supplier recommendations.</p>
4. Test batteries	<p>4.1 Information for battery testing is accessed from product and machinery manufacturer/component supplier specifications and correctly interpreted.</p> <p>4.2 Components, tooling and equipment are identified, selected and prepared in accordance with site procedures.</p> <p>4.3 Battery tests are performed and results analysed in accordance with site procedures and product/ manufacturer specifications.</p> <p>4.4 Battery testing procedures are carried out in accordance with legislation, industry and enterprise policies/ procedures guidelines.</p>
5. Jump-start machinery	<p>5.1 Information is accessed from manufacturer/component supplier specifications and correctly interpreted.</p> <p>5.2 Leads are connected/ disconnected in correct sequence and polarity.</p> <p>5.3 All work is carried out without causing damage to component or system.</p> <p>5.4 Emergency procedures are identified and followed as per manufacturer's manuals and organization's guideline.</p> <p>5.5 Workplace documents are completed and communicated in accordance with enterprise procedures.</p>
6. Clean up work area and maintain equipment	<p>6.1 Material that can be reused is collected and stored.</p> <p>6.2 Waste and scrap is removed following workplace procedure.</p> <p>6.3 Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>6.4 Unserviceable equipment is tagged and faults identified in accordance with workplace requirements.</p> <p>6.5 Operator maintenance is completed in accordance with manufacturer/component supplier specifications and site</p>

	procedures. 6.6 Tooling and equipment are maintained in accordance with workplace procedures.
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Variable	Range
Information	Sources of information/documents may include: <ul style="list-style-type: none"> • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets, diagrams or sketches • safe work procedures related to testing, servicing, charging and replacing of batteries • regulatory/legislative requirements pertaining to farm machinery, • organisation work specifications and requirements • instructions issued by authorised persons
OHS requirements	Are to be in accordance with legislation/ regulations/codes of practice and enterprise safety policies and procedures, and may include: <ul style="list-style-type: none"> • protective clothing and equipment, • use of tooling and equipment, • workplace environment and safety, • handling of material, • use of fire fighting equipment, • enterprise first aid, • hazard control and hazardous materials and substances
Personal protective equipment	Is to include: <ul style="list-style-type: none"> • that prescribed under legislation/regulations/codes of practice and workplace policies and practices
Tools and equipment	May include: <ul style="list-style-type: none"> • testing equipment including: <ul style="list-style-type: none"> ➤ load tester ➤ hydrometer ➤ multimeter or voltmeter ➤ battery charger ➤ hand tooling ➤ jumper leads and specialist tooling for adjustment
Safe operating procedures	Are to include, but are not limited to: <ul style="list-style-type: none"> • the conduct of operational risk assessment and treatments associated with: <ul style="list-style-type: none"> ➤ vehicular movement, ➤ toxic substances, ➤ electrical safety, ➤ machinery movement and operation, ➤ manual and mechanical lifting and shifting and working in proximity to others and site visitors
Material	Materials may include: <ul style="list-style-type: none"> • battery consumables and cleaning material

Environmental requirements	Are to include but are not limited to: <ul style="list-style-type: none"> • waste management • dust and clean-up management
Enterprise policies and procedures	May include: <ul style="list-style-type: none"> • quality policies and procedures including relevant Ethiopian standards • OHS, sustainability, environment, equal opportunity and anti-discrimination • manufacturer specifications and industry codes of practice • safe work procedures • reporting and recording procedures
Emergency procedures	Are to include but may not be limited to: <ul style="list-style-type: none"> • emergency shutdown and stopping of equipment • extinguishing fires • enterprise first aid requirements and site evacuation
Communication	Are to include, but are not limited to: <ul style="list-style-type: none"> • verbal and visual instructions and fault reporting and may include: <ul style="list-style-type: none"> ➤ site specific instructions ➤ written instructions ➤ plans or instructions related to job/task ➤ telephones and pagers
Faults	Faults may include: <ul style="list-style-type: none"> • internal short, excessive gassing under load and physical damage

Evidence Guide

Critical Aspects of Competence	Must demonstrate knowledge and skills competence to: <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • servicing and charging batteries • testing batteries and jump-starting machinery • removing/replacing batteries
Underpinning Knowledge and Attitudes	Demonstrate knowledge of: <ul style="list-style-type: none"> • OHS regulations/requirements, equipment, material and personal safety requirements • common farm machinery terminology • types and applications of batteries • testing, servicing and battery replacement procedures • procedures for disposal of batteries and acids • jump-starting and battery charging procedures • site reporting procedures • enterprise quality procedures • work organisation and planning processes

Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • collect, organise and understand information related to work orders, plans and safety procedures for battery testing, charging, servicing and replacement and machinery jump-starting • technical literacy and communication skills sufficient to interpret and apply common industry terminology, and interpret technical information and specifications • research and interpretive skills to locate, interpret and apply operational and safety information • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems • plan and organise activities, including preparation and layout of worksite and obtaining of equipment and material to avoid backtracking or workflow interruptions • work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity • use mathematical ideas and techniques to correctly complete tests and measurements to determine serviceability of batteries • use pre-checking and inspection techniques to anticipate planning and scheduling problems, avoid wastage of time and material • manipulative and dexterity skills to perform battery testing, servicing and charging procedures • problem-solving skills for a range of procedural issues • use workplace technology related to testing, servicing, charging and replacing of batteries, including use of specialist tooling, measuring equipment, computerised technology and communication devices and the reporting/documenting of results
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Apply Quality Standards
Unit Code	AGR FME1 12 0714
Unit Descriptor	This unit covers the knowledge, attitudes and skills required in applying quality standards in the operational activities.

Elements	Performance Criteria
1. Assess own work	<p>1.1 Completed work is checked against organization standards relevant to the activity being undertaken.</p> <p>1.2 An understanding is demonstrated on how the work activities are completed and work relate to the next process and to the final appearance of the service / product.</p> <p>1.3 Faulty service is identified and isolated in accordance with policies and procedures.</p> <p>1.4 Faults and any identified causes are recorded and reported in accordance with standard procedures.</p>
2. Assess quality of service rendered	<p>2.1 Services rendered quality is checked against standards and specifications.</p> <p>2.2 Service rendered are evaluated using the appropriate evaluation parameters and in accordance with standards.</p> <p>2.3 Causes of any identified faults are identified and corrective actions taken in accordance with policies and procedures.</p>
3. Record information	<p>3.1 Basic information on the quality performance is recorded in accordance with organization procedures.</p> <p>3.2 Records of work quality are maintained according to the requirements of the organization / enterprise.</p>
4. Study causes of quality deviations	<p>4.1 Causes of deviations from final outputs or services are investigated and reported in accordance with standard procedures.</p> <p>4.2 Suitable preventive action is recommended based on organization quality standards and causes of deviation from specified quality standards of final service or output. are identified</p>
5. Complete documentation	<p>5.1 Information on quality parameters and other indicators of service performance is recorded.</p> <p>5.2 All service processes and outcomes are recorded.</p>

Variable	Range
Quality check	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Visual inspection

	<ul style="list-style-type: none"> • Physical measurements • Check against specifications/preferences
Quality standards	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • materials • service • output • processes/procedures
Quality parameters	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • style/design/specifications • durability • service variations • materials • damage and imperfections

Evidence Guide	
Critical Aspects of Competency	<p>Demonstrates skills and knowledge in:</p> <ul style="list-style-type: none"> • Check completed work continuously against standard • Identify and isolate faulty service / workmanship • Check service rendered against organization standards • Identify and apply corrective actions on the causes of identified faults • Record basic information regarding quality performance • Investigate causes of deviations of services against standard • Recommend suitable preventive actions
Underpinning Knowledge	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • Relevant quality standards, policies and procedures • Characteristics of services • Safety environment aspects of service processes • Relevant evaluation techniques and quality checking procedures • Workplace procedures • Reporting procedures
Underpinning Skills	<p>Demonstrates skills to:</p> <ul style="list-style-type: none"> • Interpret work instructions, specifications and standards appropriate to the required work or service • Carry out relevant performance evaluation • Maintain accurate work records in accordance with procedures • Meet work specifications • Communicate effectively within defined workplace procedures
Resource Implications	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Work with Others
Unit Code	AGR FME1 13 0714
Unit Descriptor	This unit covers the knowledge, skills, and attitudes required to develop workplace relationship and contribute in workplace activities.

Element	Performance Criteria
1. Develop effective workplace relationship	<p>1.1 Duties and responsibilities are done in a positive manner to promote cooperation and good relationship</p> <p>1.2 Assistance is sought from workgroup when difficulties arise and addressed through discussions</p> <p>1.3 Feedback on performance provided by others in the team is encouraged, acknowledged and acted upon</p> <p>1.4 Differences in personal values and beliefs are respected and acknowledged in the development</p>
2. Contribute to work group activities	<p>2.1 Support is provided to team members to ensure workgroup goals are met</p> <p>2.2 Constructive contributions are made to workgroup goals and tasks according to organizational requirements</p> <p>2.3 Information relevant to work is shared with team members to ensure designated goals are met</p>

Variable	Range
Duties and responsibilities	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Job description and employment arrangements • Organization's policy relevant to work role • Organizational structures • Supervision and accountability requirements including OHS • Code of conduct
Work group	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Supervisor or manager • Peers/work colleagues • Other members of the organization
Feedback on performance	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Formal/Informal performance appraisal • Obtaining feedback from supervisors and colleagues and clients • Personal, reflective behaviour strategies • Routine organizational methods for monitoring service delivery
Providing support to team members	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Explaining/clarifying • Helping colleagues

	<ul style="list-style-type: none"> • Providing encouragement • Providing feedback to another team member • Undertaking extra tasks if necessary
Organizational requirements	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Goals, objectives, plans, system and processes • Legal and organization policy/guidelines • OHS policies, procedures and programs • Ethical standards • Defined resources parameters • Quality and continuous improvement processes and standards

Evidence Guide	
Critical aspects of Competence	<p>Demonstrates skills and knowledge in:</p> <ul style="list-style-type: none"> • Provide support to team members to ensure goals are met • Act on feedback from clients and colleagues • Access learning opportunities to extend own personal work competencies to enhance team goals and outcomes
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • relevant legislation that affects operations, especially with regards to safety • reasons why cooperation and good relationships are important • knowledge of the organization's policies, plans and procedures • understanding how to elicit and interpret feedback • knowledge of workgroup member's responsibilities and duties • importance of demonstrating respect and empathy in dealings with colleagues • understanding of how to identify and prioritize personal development opportunities and options
Underpinning Skills	<p>Demonstrates skills to:</p> <ul style="list-style-type: none"> • read and understand the organization's policies and work procedures • write simple instructions for particular routine tasks • interpret information gained from correspondence • request advice, receive feedback and work with a team • organize work priorities and arrangement • select and use technology appropriate to a task • relate to people from a range of social, cultural and ethnic backgrounds
Resource Implications	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Receive and Respond to Workplace Communication
Unit Code	AGR FME1 14 0714
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to receive, respond and act on verbal and written communication.

Element	Performance Criteria
1. Follow routine spoken messages	1.1 Required information are gathered by listening attentively and correctly interpreting or understanding information/instructions 1.2 Instructions/information are properly recorded 1.3 Instructions are acted upon immediately in accordance with information received 1.4 Clarification is sought from workplace supervisor on all occasions when any instruction/information is not clear
2. Perform workplace duties following written notices	2.1 Written notices and instructions are read and interpreted correctly in accordance with organizational guidelines 2.2 Routine written instruction is followed in sequence 2.3 Feedback is given to workplace supervisor based on the instructions/information received

Variable	Range
Written notices and instructions	May include but not limited to: <ul style="list-style-type: none"> • Handwritten and printed material • Internal memos • External communications • Electronic mail • Briefing notes • General correspondence • Marketing materials • Journal articles
Organizational guidelines	May include but not limited to: <ul style="list-style-type: none"> • Information documentation procedures • Company policies and procedures • Organization manuals • Service manual

Evidence Guide	
Critical Aspects of Competence	Demonstrates skills and knowledge in: <ul style="list-style-type: none"> • Organizational procedures for handling verbal and written communications • Receive and act on verbal messages and instructions

	<ul style="list-style-type: none"> • Demonstrate competence in recording instructions/information
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • organizational policies/guidelines in regard to processing internal/external information • ethical work practices in handling communications • communication process
Underpinning Skills	<p>Demonstrates skills to:</p> <ul style="list-style-type: none"> • receive and clarify conciseness messages/information/communication • record messages/information accurately
Resource Implications	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Demonstrate Work Values
Unit Code	AGR FME1 15 0714
Unit Descriptor	This unit covers the knowledge, skills and attitude required in demonstrating proper work values.

Elements	Performance Criteria
1. Define the purpose of work	<p>1.1 One's unique sense of purpose for working and the 'whys' of work is identified, reflected on and clearly defined for one's development as a person and as a member of society.</p> <p>1.2 Personal mission is achieved in harmony with company's values</p>
2. Apply work values/ethics	<p>2.1 Work values/ethics/concepts are classified and reaffirmed in accordance with the transparent company ethical standards, policies and guidelines.</p> <p>2.2 Work practices are undertaken in compliance with industry work ethical standards, organizational policy and guidelines</p> <p>2.3 Personal behavior and relationships with co-workers and/or clients are conducted in accordance with ethical standards, policy and guidelines.</p> <p>2.4 Company resources are used in accordance with transparent company ethical standard, policies and guidelines.</p>
3. Deal with ethical problems	<p>3.1 Company ethical standards, organizational policy and guidelines on the prevention and reporting of unethical conduct are accessed and applied in accordance with transparent company ethical standard, policies and guidelines.</p> <p>3.2 Work incidents/situations are reported and/or resolved in accordance with company protocol/guidelines.</p> <p>3.3 Resolution and/or referral of ethical problems identified are used as learning opportunities.</p>
4. Maintain integrity of conduct in the workplace	<p>4.1 Personal work practices and values are demonstrated consistently with acceptable ethical conduct and company's core values.</p> <p>4.2 Instructions are provided to co-workers based on ethical, lawful and reasonable directives.</p> <p>4.3 Company values/practices are shared with co-workers using appropriate behaviour and language.</p>

Variable	Range
Work values/ethics/ concepts	May include but are not limited to: <ul style="list-style-type: none"> • Commitment/ Dedication • Sense of urgency • Sense of purpose • Love for work • High motivation • Orderliness • Reliability and Dependability • Competence • Goal-oriented • Sense of responsibility • Being knowledgeable • Loyalty to work/company • Sensitivity to others • Compassion/Caring attitude • Balancing between family and work • Sense of nationalism
Work practices	May include but are not limited to: <ul style="list-style-type: none"> • Quality of work • Punctuality • Efficiency • Effectiveness • Productivity • Resourcefulness • Innovativeness/Creativity • Cost consciousness • 5S • Attention to details
Company resources	May include but are not limited to: <ul style="list-style-type: none"> • Consumable materials • Equipment/Machineries • Human • Time • Financial resources
Work incidents/ Situations	May include but are not limited to: <ul style="list-style-type: none"> • Violent/intense dispute or argument • Gambling • Use of prohibited substances • Pilferages • Damage to person or property • Vandalism • Falsification • Bribery • Sexual Harassment • Blackmail

Evidence Guide	
Critical Aspects of Competence	<p>Demonstrates skills and knowledge in:</p> <ul style="list-style-type: none"> • Define one's unique sense of purpose for working • Clarify and affirm work values/ethics/concepts consistently in the workplace • Demonstrate work practices satisfactorily and consistently in compliance with industry work ethical standards, organizational policy and guidelines • Demonstrate personal behaviour and relationships with co-workers and/or clients consistent with ethical standards, policy and guidelines • Use company resources in accordance with company ethical standard, policies and guidelines. • Follow company ethical standards, organizational policy and guidelines on the prevention and reporting of unethical conduct/behaviour
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • Occupational health and safety • Work values and ethics • Company performance and ethical standards • Company policies and guidelines • Fundamental rights at work including gender sensitivity • Work responsibilities/job functions • Corporate social responsibilities • Company code of conduct/values • Balancing work and family responsibilities
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> • Interpersonal skills • Communication skills • Self awareness, understanding and acceptance • Application of good manners and right conduct
Resource Implications	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Develop Understanding of Entrepreneurship
Unit Code	<u>AGR FME1 16 0714</u>
Unit Descriptor	This unit covers skills, knowledge and attitude required to understand the principles, functions, strategies and methods of entrepreneurship. It also covers identifying and developing the major entrepreneurial competences.

Elements	Performance Criteria
1. Describe and explain the principles, concept and scope of entrepreneurship	<p>1.1 The principles, concept and terminology of entrepreneurship are analyzed and discussed.</p> <p>1.2 The different / various forms of enterprises in the community are identified and their roles understood.</p> <p>1.3 The identified enterprises are categorized and classified.</p> <p>1.4 The terms and elements involved in the concept of enterprising, both on a personal level and in the context of classification being enterprising in business are identified and interpreted.</p> <p>1.5 Functions of entrepreneurship in business and how the entrepreneurs improved business and economic environment are explained.</p>
2. Discuss how to become entrepreneur	<p>2.1 Self-employment as an alternative option for an individual economic independence and personal growth is discussed and analyzed.</p> <p>2.2 Advantages and disadvantages of self-employment are discussed and explained.</p> <p>2.3 Entrepreneurial characteristics and traits are identified and discussed.</p> <p>2.4 Self-potential is assessed to determine if qualified to become future entrepreneur.</p> <p>2.5 Major competences of successful entrepreneurship are identified and explained.</p>
3. Discuss how to organize an enterprise	<p>3.1 The importance and role of business entrepreneurship in the society are discussed and correlated to the operations of the economy.</p> <p>3.2 Facts about small and medium enterprises are discussed, clarified and understood.</p> <p>3.3 Key success factor in setting up small and medium business are identified and explained.</p> <p>3.4 Business opportunities are identified and assessed.</p> <p>3.5 Business ideas are generated using appropriate tools,</p>
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	<p>techniques and steps.</p> <p>3.6 Procedures for identifying suitable market for business are discussed and understood.</p> <p>3.7 Major factors to consider in selecting a location for a business are identified and discussed.</p> <p>3.8 Basic types of business ownership are identified and explained.</p> <p>3.9 Amount of money needed to start an enterprise estimated and distinction between pre operations and initial operation payments clarified.</p> <p>3.10 Advantages and disadvantages of using various sources of capital to start an enterprise are identified.</p>
4. Discuss how to operate an enterprise	<p>4.1 Disadvantages and advantages of three alternatives means of becoming an entrepreneur are identified and understood.</p> <p>4.2 Process of hiring and managing people is discussed and explained.</p> <p>4.3 The importance and techniques of managing time are discussed and understood.</p> <p>4.4 The techniques and procedures of managing sales are discussed and explained.</p> <p>4.5 Factors to consider in selecting suppliers and the steps to follow when doing business with them are identified and discussed.</p> <p>4.6 Awareness of how new technologies can affect small and medium business are developed.</p> <p>4.7 Characteristics of appropriate technology for use in small and medium business are identified and explained.</p> <p>4.8 Different types of cost that occur in a business and how to manage them are discussed and understood.</p> <p>4.9 Factors and procedures in knowing the cost of the enterprise are discussed and understood.</p> <p>4.10 Importance of financial record keeping and preparing simple financial statement are explained and understood.</p> <p>4.11 The application of self-management skills and negotiation skills are discussed in operating a business.</p> <p>4.12 Risk assessment and management of business enterprise are performed.</p>
5. Develop one's own business plan	<p>5.1 Process of preparing/ writing a business plan is discussed and applied.</p> <p>5.2 Standard structure and format are applied in preparing</p>

	<p>business plan.</p> <p>5.3 Findings of the business plan are interpreted, assessed and analyzed.</p> <p>5.4 Feasibility of the business idea is made clear and understandable.</p> <p>5.5 Problems that may arise or encounter when starting a business are identified and understand.</p> <p>5.6 Techniques and procedures in obtaining and sourcing information are discussed and understood.</p>
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Variables	Range
Classification	<p>May include:</p> <ul style="list-style-type: none"> • Private vs. public • Profit vs. non-profit • Formal vs. Non-formal • Individual vs. Community • Local vs. Foreign • Business vs. Social • Small vs. Large • Manufacturing vs. Service • Consumer vs. Industrial
Major factors	<p>May include:</p> <ul style="list-style-type: none"> • Economics (local economy) • Population • Competition
Three alternatives	<p>May include:</p> <ul style="list-style-type: none"> • Buying an existing business • Starting a new business • Operating a franchising business

Evidence Guide	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate to:</p> <ul style="list-style-type: none"> • explain principles and concept of entrepreneurship • discuss how to become entrepreneur • discuss how to organize an enterprise • discuss how to operate an enterprise • develop business plan
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • Entrepreneurship principles, concepts and terminologies • Entrepreneurial competence • Entrepreneurial motivation • Risk assessment and evaluation • Principles and process of negotiations • Self-management and self-employment • Managing sales, people and time • Factors in setting up small and medium business

	<ul style="list-style-type: none"> • Small and Medium Enterprise • Business plan development • Discussion techniques and procedures
Underpinning Skills	<p>Demonstrate skills in:</p> <ul style="list-style-type: none"> • Planning and Leading • Presentation skills • Using technology • Managing money • Preparing simple financial statement • Selecting suppliers
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Farm Machinery and Equipment Operation Support Work Level I	
Unit Title	Apply 3S
Unit Code	AGR FME1 17 0714
Unit Descriptor	This unit of competence covers the knowledge, skills and attitudes required by a worker to apply 3S techniques to his/her workplace. The unit assumes the worker has a particular job in the allocated workplace known by the individual.

Elements	Performance Criteria
1. Organize junior Kaizen Promotion Team (KPT).	<p>1.1 Basics, principles and stages of KPT are identified using appropriate procedures.</p> <p>1.2 Structure of Junior KPT is established in accordance with the organizational procedures.</p> <p>1.3 Effective and appropriate contributions are made to complement team activities and objectives using individual skills and competencies.</p> <p>1.4 Effective and appropriate forms of communications are used and undertaken with KPT members who contribute to know KPT activities and objectives.</p> <p>1.5 Kaizen Board (Visual Management Board) is prepared and used in harmony with different workplace contexts.</p>
2. Prepare for work.	<p>2.1 Work instructions are used to determine job requirements, including method, material and equipment.</p> <p>2.2 Job specifications are read and interpreted following working manual.</p> <p>2.3 OHS requirements, including dust and fume collection, breathing apparatus and eye and ear personal protection needs are observed throughout the work.</p> <p>2.4 Appropriate materials are selected.</p> <p>2.5 Safety equipment and tools are identified and checked for safe and effective operation.</p>
3. Sort items.	<p>3.1 Plan is prepared to implement sorting activities.</p> <p>3.2 Cleaning activities are performed.</p> <p>3.3 All items in the workplace are identified following the appropriate procedures.</p> <p>3.4 Necessary and unnecessary items are listed using the appropriate format.</p> <p>3.5 Red tag strategy is used for unnecessary items.</p> <p>3.6 Unnecessary items are evaluated and placed in an appropriate place other than the workplace.</p>

	<p>3.7 Necessary items are recorded and quantified using appropriate format.</p> <p>3.8 Performance results are reported using appropriate formats.</p> <p>3.9 Necessary items are regularly checked in the workplace.</p>
4. Set all items in order.	<p>4.1 Plan is prepared to implement set in order activities.</p> <p>4.2 General cleaning activities are performed.</p> <p>4.3 Location/layout, storage and indication methods for items are decided.</p> <p>4.4 Necessary tools and equipment are prepared and used for setting in order activities.</p> <p>4.5 Items are placed in their assigned locations.</p> <p>4.6 After use, the items are immediately returned to their assigned locations.</p> <p>4.7 Performance results are reported using appropriate formats.</p> <p>4.8 Each item is regularly checked in its assigned location and order.</p>
5. Perform shine activities.	<p>5.1 Plan is prepared to implement shine activities.</p> <p>5.2 Necessary tools and equipment are prepared and used for shinning activities.</p> <p>5.3 Shine activity is implemented using appropriate procedures.</p> <p>5.4 Performance results are reported using appropriate formats.</p> <p>5.5 Regular shinning activities are conducted.</p>

Variable	Range
Junior KPT	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • 3S • 3MU (Mura, Muri and MUDA) • 4P (Policy, Procedure, People and Plant) • 4M (Material, Method, Man and Machine) • PDCA (Plan, Do, Check and Act)
OHS requirements	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • Legislation/ regulations/codes of practice and enterprise safety policies and procedures. This may include protective clothing and equipment, use of tooling and equipment, workplace environment and safety, handling of material, use of fire fighting equipment, enterprise first aid, hazard control and hazardous materials and substances. • Personal protective equipment is to include that prescribed
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	<p>under legislation/regulations/codes of practice and workplace policies and practices.</p> <ul style="list-style-type: none"> • Safe operating procedures are to include, but are not limited to the conduct of operational risk assessment and treatments associated with workplace organization. • Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation.
Safety equipment and tools	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • dust masks / goggles • glove • working cloth • first aid • safety shoes
Items	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • tools • jigs/fixtures • materials/components • machine and equipment • manuals • documents • personal items (e.g. bags, lunch boxes and posters) • safety equipment and personal protective equipment • other items which happen to be in the work area
The appropriate procedures	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • steps for implementing 3S (sort, set in order and shine) activities. • written, verbal and computer based or in some other format.
Unnecessary items	<p>are not needed for current production or administrative operation and include but not limited to:</p> <ul style="list-style-type: none"> • defective or excess quantities of small parts and inventory • outdated or broken jigs and dies • worn-out bits • outdated or broken tools and inspection gear • old rags and other cleaning supplies • electrical equipment with broken cords • outdated posters, signs, notices and memos <p>some locations where unneeded items tend to accumulate may include but not limited to:</p> <ul style="list-style-type: none"> • in rooms or areas not designated for any particular purpose • in corners next to entrances or exists • along interior and exterior walls • next to partitions and behind pillars • under the eaves of warehouses • under desks and shelves and in desk and cabinet drawers • near the bottom of tall stacks of items

	<ul style="list-style-type: none"> • on unused management and production schedule boards • in tools boxes that are not clearly sorted
Appropriate format	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • all items. • necessary items. • unnecessary items.
Red tag	<p>A format prepared with a red color paper or card which is filled and attached temporarily on the unnecessary items until decision is made. The red tag catch people's attention because red is a color that stands out. So to fill and attach red tag on items, asks the following three questions:</p> <ul style="list-style-type: none"> • Is this item needed? • If it is needed, is it needed in this quantity? • If it is needed, does it need to be located here?
Necessary items	<p>Are required in the workplace for current production or administrative operation in the amount needed.</p>
Tools and equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • paint • hook • sticker • signboard • nails • shelves • chip wood • sponge • broom • pencil • shadow board/ tools board
Shine activity	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Inspection • Cleaning • Minor maintenance may include: <ul style="list-style-type: none"> ➢ Tightening bolts ➢ Lubrication ➢ Replacing missing parts

Evidence Guide

Critical Aspects of Competence	<p>Demonstrates skills and knowledge to:</p> <ul style="list-style-type: none"> • Discuss how to organize KPT. • Describe the pillars of 5S. • Implement 3S in own workplace by following appropriate procedures.
Underpinning Knowledge and Attitude	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • Kaizen principle, pillars and concept • Key characteristic of Kaizen • Elements of Kaizen

	<ul style="list-style-type: none"> • Wastes/MUDA • Basics of KPT • Aims, benefits and principles of KPT • Stages of KPT • Structure and role of the components of Junior KPT • Concept and parts of Kaizen board • Concept and benefits of 5S • The pillars of 5S • Three stages of 5S application • Benefits and procedure of sorting activities • The concept and application of Red Tag strategy • OHS procedures • Benefits and procedure of set in order activities • Set in order methods/techniques • Benefits and procedure of shine activities • Inspection methods • Planning and reporting methods • Method of Communication
Underpinning Skills	<p>Demonstrates skills of:</p> <ul style="list-style-type: none"> • Participating actively in KPT • technical drawing • communication skills • planning and reporting own tasks in implementation of 3S • following procedures to implement 3S in own workplace • using sorting formats to identify necessary and unnecessary items • improving workplace layout following work procedures • preparing labels, slogans, etc. • reading and interpreting documents • observing situations • gathering evidence by using different means • recording activities and results using prescribed formats • working with others • solving problems by applying 3S • preparing and using Kaizen board • preparing and using tools and equipment to implement 3S
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

FARM MACHINERY AND EQUIPMENT OPERATION

