

FARM MACHINERY OPERATION

ISCED UNIT CODE: 0716 351 06A

TVETCDACC UNIT CODE: HO/CU/HP/CR/02/4/MA

Unit duration: 100 Hours

Relationship to Occupational Standards

This unit addresses the Unit of Competency: **Operate farm Machinery**

Unit Description

This unit specifies the competencies required to operate farm machinery. It involves operate hand tools and equipment, operate tillage machinery, operate planting machinery, operate crop protection machinery, operate harvesting machinery and operate agro-processing machinery.

Summary of Learning Outcomes

SNO	Learning Outcome	Duration (Hours)
1.	Operate hand tools and equipment.	15
2.	Operate tillage machinery	15
3.	Operate planting machinery	20
4.	Operate crop protection machinery	15
5.	Operate harvesting machinery	20
6.	Operate Agro-processing machinery	15

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcomes	Content	Suggested Assessment Methods
1. Operate hand tools and equipment	Theory 1.1 Personal protective equipment 1.1.1 PPE requirements 1.1.2 Importance of PPE 1.1.3 Uses and care 1.2 Hand tools and equipment 1.2.1 Definition of terms 1.2.2 Types of hand tools and equipment's 1.2.2.1 Garden tools and equipment 1.2.2.2 Workshop tools and equipment 1.2.2.3 Carpentry tools and equipment	<ul style="list-style-type: none">PracticalsWritten testsProjectsInterviews/ Oral questionsIndividual/group assignmentsThird party report

	<p>1.2.2.4 Masonry tools and equipment</p> <p>1.3 Uses and operation of hand tools and equipment's</p> <p>1.4 Maintenance of hand tools and equipment's</p> <ul style="list-style-type: none"> 1.4.1 Servicing 1.4.2 Repair 1.4.3 storage <p>Practice</p> <p>1.5 Operate farm hand tools and equipment's as per the checklist.</p> <ul style="list-style-type: none"> 1.5.1 Garden tools and equipment 1.5.2 Workshop tools and equipment 1.5.3 Carpentry tools and equipment 1.5.4 Masonry tools and equipment <p>1.6 Maintain farm hand tools and equipment's in 1.5.</p>	
2. Operate tillage machinery	<p>Theory</p> <p>2.1 Tillage machinery</p> <ul style="list-style-type: none"> 2.1.1 Types of tillage machinery <ul style="list-style-type: none"> 2.1.1.1 Ploughs 2.1.1.2 Harrows 2.1.1.3 Tillers 2.1.1.4 Rotavators 2.1.1.5 Subsoilers <p>2.2 Uses and operation of tillage machinery</p> <p>2.3 Maintenance of tillage machinery</p> <ul style="list-style-type: none"> 2.3.1 Servicing 2.3.2 Repair 2.3.3 storage <p>Practice</p> <p>2.4 Operate tillage machinery used in the farm</p> <ul style="list-style-type: none"> 2.4.1 Ploughs 2.4.2 Harrows 2.4.3 Tillers 2.4.4 Rotavators 2.4.5 Subsoilers <p>2.5 Maintain farm tillage machinery in 2.5</p>	<ul style="list-style-type: none"> • Practicals • Written tests • Projects • Interviews/ Oral questions • Individual/group assignments • Third party report
3. Operate planting machinery	<p>Theory</p> <p>3.1 Planting machinery</p> <ul style="list-style-type: none"> 3.1.1 Types of planting machinery <ul style="list-style-type: none"> 3.1.1.1 Seed drills 3.1.1.2 Planters 3.1.1.3 Ridgers 3.1.1.4 Fertilizer distributors 	<ul style="list-style-type: none"> • Practicals • Written tests • Projects • Interviews/ Oral questions • Individual/group assignments

	<p>3.1.1.5 Manure spreaders</p> <p>3.2 Uses and operation of planting machinery</p> <p>3.3 Maintenance of planting machinery</p> <ul style="list-style-type: none"> 3.3.1 Servicing 3.3.2 Repair 3.3.3 storage <p>Practice</p> <p>3.4 Operate planting machinery used in the farm</p> <ul style="list-style-type: none"> 3.4.1 Seed drills 3.4.2 Planters 3.4.3 Ridgers 3.4.4 Fertilizer distributors 3.4.5 Manure spreaders <p>3.5 Maintain planting machinery in 3.5</p>	<ul style="list-style-type: none"> • Third party report
4. Operate crop protection machinery	<p>Theory</p> <p>4.1 Crop protection machinery</p> <ul style="list-style-type: none"> 4.1.1 Types of Crop protection machinery 4.1.1.1 Sprayers 4.1.1.2 Dusters <p>4.2 Uses and operation of Crop protection machinery</p> <p>4.3 Maintenance of Crop protection machinery</p> <ul style="list-style-type: none"> 4.3.1 Servicing 4.3.2 Repair 4.3.3 storage <p>Practice</p> <p>4.4 Operate Crop protection machinery used in the farm</p> <ul style="list-style-type: none"> 4.4.1 Sprayers 4.4.2 Dusters <p>4.5 Maintain crop protection machinery in 4.5</p>	<ul style="list-style-type: none"> • Practicals • Written tests • Projects • Interviews/ Oral questions • Individual/group assignments • Third party report
5. Operate harvesting machinery	<p>Theory</p> <p>5.1 Harvesting machinery</p> <ul style="list-style-type: none"> 5.1.1 Types of harvesting machinery 5.1.1.1 Balers 5.1.1.2 Mowers 5.1.1.3 Combined harvesters 5.1.1.4 Potato harvester 5.1.1.5 Threshers <p>5.2 Uses and operation of harvesting machinery</p> <p>5.3 Maintenance of harvesting machinery</p>	<ul style="list-style-type: none"> • Practicals • Written tests • Projects • Interviews/ Oral questions • Individual/group assignments • Third party report

	<p>5.3.1 Servicing 5.3.2 Repair 5.3.3 storage</p> <p>Practice</p> <p>5.4 Operate harvesting machinery used in the farm</p> <ul style="list-style-type: none"> 5.4.1 Balers 5.4.2 Mowers 5.4.3 Combined harvesters 5.4.4 Potato harvester 5.4.5 Threshers <p>5.5 Maintain harvesting machinery in 5.5</p>	
6. Operate Agro-processing machinery	<p>Theory</p> <p>6.1 Agro-processing machinery</p> <ul style="list-style-type: none"> 6.1.1 Types of Agro-processing machinery <ul style="list-style-type: none"> 6.1.1.1 Mills 6.1.1.2 Grinders 6.1.1.3 Shellers 6.1.1.4 Dryers 6.1.1.5 Elevator's conveyors <p>6.2 Uses and operation of Agro-processing machinery</p> <p>6.3 Maintenance of Agro-processing machinery</p> <ul style="list-style-type: none"> 6.3.1 Servicing 6.3.2 Repair 6.3.3 storage <p>Practice</p> <p>6.4 Operate Agro-processing machinery used in the farm</p> <ul style="list-style-type: none"> 6.4.1 Mills 6.4.2 Grinders 6.4.3 Shellers 6.4.4 Dryers 6.4.5 Elevator's conveyors <p>6.5 Maintain Agro-processing machinery in 6.5</p>	<ul style="list-style-type: none"> • Practicals • Written tests • Projects • Interviews/ Oral questions • Individual/group assignments • Third party report

Suggested Methods of Instruction

- Demonstration
- Experiment
- Group discussion
- Direct instruction

Recommended Resources for 25 Trainees

General Resources	Tools and Equipment	Materials and Supplies
● Source of water	● 25 Garden tools	● Fertilizer distributors
● Gutters	● 25 Workshop tools	● Manure spreaders
● 25 Bucket	● 25 Carpentry tools	● Sprayers
● 25 Shears	● 25 Masonry tools	● Dusters
● 25 Soil augur	● Ploughs	● Balers
● 25 Panga	● Harrows	● Mowers
● 25 Hammer	● Tillers	● Combined harvesters
● 25 Saw	● Rotavators	● Potato harvester
● 10 Flow meters	● Subsoilers	● Threshers
● 10 Pumps	● Seed drills	● Mills
● 10 Sprinkler	● Planters	● Grinders
● 25 Dibbler	● Ridgers	● Shellers
	● Sampling bags	● Dryers
	● Labels	● Elevator's conveyors
	● Marker pens	● Fertilizer distributors