

ANNUAL CROP PRODUCTION

UNIT CODE: 0811 551 02 A

TVET CDACC UNIT CODE: AGR/CU/EXT/CR/02/4/MA

UNIT DURATION: 100 HOURS

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Produce Annual Crops

Unit Description

This unit specifies the competencies required to produce annual crops. It involves preparing planting materials, preparing crop seedbed, planting annual crops, managing annual crops harvesting annual crop, and processing annual crops products.

NOTE: The trainer to select as many annual crops in the range as possible for propagation and distribute among trainees. The choice should be based on ecological zone, interest of trainees and market demands. This will allow for variety of learning fields for trainees

Summary of Learning Outcomes

SNO	Learning Outcome	Duration (Hours)
1.	Prepare planting materials	15
2.	Prepare crop seedbed	20
3.	Plant annual crops	15
4.	Manage annual crops	20
5.	Harvest annual crops	15
6.	Process annual crops products.	20

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcomes	Content	Suggested Methods	Assessment
1. Prepare planting materials	Theory 1.1 Prepare planting materials 1.1.1 Market survey 1.1.2 Annual crop production business plan 1.1.3 Sources of finances 1.1.4 Assemble land preparation tools and equipment 1.1.4.1 Axes	<ul style="list-style-type: none">• Written tests• Reflection papers• Projects• Interviews/ questions• Workshop reports• Individual/group assignments• Practicals	Oral

	<p>1.1.4.2 Panga</p> <p>1.1.4.3 Rake</p> <p>1.1.4.4 Slasher</p> <p>1.1.4.5 Tillage tools/equipment/machinery</p> <p>1.1.4.6 Fork jembe</p> <p>1.1.4.7 Harrows</p> <p>1.1.4.8 Hoe</p> <p>1.1.4.9 Tractor</p> <p>1.1.4.10 Equipment</p> <p>1.1.4.11 Mower</p> <p>1.1.4.12 Rotavator</p> <p>1.1.4.13 Wheelbarrow</p> <p>1.1.4.14 Ridgers</p> <p>1.1.4.15 Moulboard plough</p> <p>1.1.4.16 Disc plough</p> <p>1.1.4.17 Disc harrow</p> <p>1.2 Uses of land preparation tools and equipment</p> <p>1.3 Maintenance of land preparation tools and equipment</p> <p>1.4 Obtain planting materials</p> <p>1.4.1 Types of planting materials</p> <p>1.4.1.1 Seeds and seedlings</p> <p>1.4.1.2 Splits</p> <p>1.4.1.3 Crowns</p> <p>1.4.1.4 Slips</p> <p>1.4.1.5 Cuttings</p> <p>1.4.1.6 Suckers</p> <p>1.4.1.7 Vines</p> <p>1.4.1.8 Stem tubers</p>	
2. Prepare crop seedbed	<p>Theory</p> <p>2.1 Land clearing</p> <p>2.2 importance of land clearing</p> <p>2.3 methods of land clearing</p> <p>2.3.1.1 Manual clearing</p> <p>2.3.1.2 Mechanical clearing</p> <p>2.3.1.3 Controlled burning</p> <p>2.3.1.4 Chemical clearing</p> <p>2.3.1.5 Grubbing</p> <p>2.3.1.6 Grazing</p>	<ul style="list-style-type: none"> • Written tests • Reflection papers • Projects • Interviews/ questions • Workshop reports • Individual/group assignments • practical <p>Oral</p>

	<p>2.4 . Perform tillage operations</p> <p>2.4.1 Definition of terms</p> <p>2.4.2 Importance of tillage</p> <p>2.4.3 Types of tillage</p> <p>2.4.3.1 Primary tillage</p> <p>2.4.3.2 Secondary tillage</p> <p>2.4.3.3 Tertiary tillage</p> <p>2.4.3.4 Zero/minimum tillage</p> <p>Practice</p> <p>2.5 carry out soil conservation measures</p> <p>2.5.1 Contour planting</p> <p>2.5.2 Terraces</p> <p>2.5.3 Gabions</p> <p>2.5.4 Mulching</p> <p>2.5.5 Cover cropping</p> <p>2.5.6 Minimum tillage</p> <p>2.5.7 Crop rotation</p> <p>2.5.8 Intercropping</p> <p>2.6 carry out tillage operations</p>	
3. Plant Annual crops	<p>Theory</p> <p>3.1 plant annual crops</p> <p>3.1.1 types of farm inputs</p> <p>3.1.1.1 inorganic fertilizers</p> <p>3.1.1.2 Seeds</p> <p>3.1.1.3 Vegetative propagation materials</p> <p>3.1.1.4 Manures</p> <p>3.2 methods of planting annual crops</p> <p>3.2.1 Direct seeding</p> <p>3.2.2 Transplanting</p> <p>3.2.3 Drilling</p> <p>3.2.4 Broadcasting</p> <p>3.2.5 Hill planting</p> <p>3.2.6 Row planting</p> <p>3.3 advantages and disadvantages of various planting methods</p> <p>3.4 prepare annual crops planting records</p> <p>Practice</p> <p>3.5 carry out the establishment of annual crops.</p>	<ul style="list-style-type: none"> • Written tests • Reflection papers • Projects • Interviews/ questions Oral • Workshop reports • Individual/group assignments • practical
4. Manage annual crops	<p>Theory</p> <p>1.1 field management practices in annual crops</p>	<ul style="list-style-type: none"> • Written tests • Reflection papers • Projects

	<p>1.2 importance of field management practices in annual crops</p> <p>1.3 types of field management practices in annual crops</p> <p>1.3.1 Mulching</p> <p>1.3.2 Gapping</p> <p>1.3.3 Thinning</p> <p>1.3.4 Training</p> <p>1.3.5 Fertilizer application</p> <p>1.3.6 Pruning</p> <p>1.3.7 Trellising</p> <p>1.4 prepare annual crops field management records</p> <p>Practice</p> <p>1.5 Carry out field management practices in annual crops.</p>	<ul style="list-style-type: none"> • Interviews/questions • Workshop reports • Individual/group assignments • Practicals 	Oral
5. Harvest Annual crops	<p>Theory</p> <p>5.1 Harvesting annual crops</p> <p>5.1.1 Definition of terms</p> <p>5.1.2 Importance of timely harvesting of annual crops</p> <p>5.2 Harvesting tools and equipment</p> <p>5.2.1 Sickle</p> <p>5.2.2 Combined harvesters</p> <p>5.2.3 Hoes and shovels</p> <p>5.2.4 Harvesting knife</p> <p>5.2.5 Buckets and baskets</p> <p>5.2.6 Pruning shears</p> <p>5.3 Uses of harvesting tools and equipment in to harvest annual crops</p> <p>5.4 Maintenance of harvesting tools and equipment in annual crops</p> <p>5.5 Maturity indices in annual crops</p> <p>5.5.1 indices</p> <p>5.5.1.1 colour</p> <p>5.5.1.2 texture</p> <p>5.5.1.3 size and shape</p> <p>5.5.1.4 firmness</p> <p>5.5.2 Importance of maturity indices in annual crops</p> <p>5.6 Methods of harvesting annual crops</p> <p>5.6.1 Hand picking</p> <p>5.6.2 Use of tools</p> <p>5.6.3 Use of machinery</p>	<ul style="list-style-type: none"> • Written tests • Reflection papers • Projects • Interviews/questions • Workshop reports • Individual/group assignments • Practical 	Oral

	5.7 prepare harvesting records Practice 5.8 Carry out harvesting of annual crops	
6. Process annual crops products	Theory 6.1 Process annual crops products 6.1.1 Definition of terms 6.1.2 Importance of processing annual crops products 6.2 processing tools and Equipments and machines 6.2.1 Blender 6.2.2 Mortar and pestle 6.2.3 Weighing scale 6.2.4 Knives/cutting materials 6.2.5 Weighing cup 6.2.6 Bowl choppers 6.2.7 Bandsaws 6.2.8 Slicers 6.2.9 Marinating 6.2.10 vacuum tumblers 6.2.11 Peelers 6.3 Uses of processing tools and equipment 6.4 Maintenance of processing tools and equipment 6.5 Methods of processing annual crops products 6.5.1.1 harvesting 6.5.1.2 threshing 6.5.1.3 drying 6.5.1.4 cleaning 6.5.1.5 milling /grinding 6.6 Distribution of annual crops products 6.7 Preparation of annual crops product records Practice 6.8 Carry out processing of annual crops products using various methods	<ul style="list-style-type: none"> • Written tests • Reflection papers • Projects • Interviews/ Oral questions • Workshop reports • Individual/group assignments • Practicals

Suggested Methods of Instruction

- Role playing
- Group discussion
- Direct instruction

Recommended Resources for 25 Trainees

S/No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
A	Learning Materials			
1.	Journals		5 pcs	1:5
2.	writing materials		50	2:1
3.	Charts		1	1:25
4.	PowerPoint presentations	For trainer's use		
5.	Whiteboard		1	1:25
6.	Assorted color of whiteboard markers	For trainer's use		
7.	Printers		1	1:25
8.	Projector		1	1:25
B	Learning Facilities & infrastructure			
1.	Lecture/theory room		1	1:25
2.	Agriculture lab		1	1:25
C	Tools and Equipment			
1.	Hoe		25	1:1
2.	Machete		25	1:1
3.	Harrows		1	1:25
4.	Subsoilers		1	1:25
5.	Planters		1	1:25