# NATIONAL SKILLS QUALIFICATION

(NSQ)

# CROP PRODUCTION LEVEL 1

### NATIONAL SKILLS QUALIFICATION

### QCF LEVEL 1 -CEREAL CROP PRODUCTION

### **GENERAL INFORMATION**

### **QUALIFICATION PURPOSE**

This qualification is aimed at developing competence in Cereal Crops Production for youth employment and food security.

### **QUALIFICATION OBJECTIVES**

To achieve this qualification, the farm attendant should be able to demonstrate the knowledge of:

- 1. Health and safety
- 2. Team work
- 3. Communication
- 4. Site selection
- 5. Land preparation for nursery and field
- 6. Nursery and planting practices
- 7. Crop management practices
- 8. Harvesting and harvesting procedures
- 9. Processing and storage
- 10. Transport and marketing of products

# **Mandatory Units**

S/No /Unit No	Reference Number	NOS Title	Credit Value	Guided Learning Hours	Remark
1	AGR/CRP/C/OO1/L1	Occupational health and safety	2	20	Level 1
2	AGR/CRP/C/002/L1	Communication in Crop Production	2	20	Level 1
3	AGR/CRP/C/003/L1	Team work in Crop Production	4	40	Level 1
4	AGR/CRP/C/004/L1	Site selection	4	40	Level 1
	TOTAL		12	120	

# **Optional Units**

S/No /Unit No	Reference Number	NOS Title	Credit Value	Guided Learning Hours	Remark
5	AGR/CRP/C/005/L1	Land preparation for nursery and field	3	30	Level 1
6	AGR/CRP/C/006/L1	Nursery and planting practices	3	30	Level 1
7	AGR/CRP/C/007/L1 Crop 3 management practices		3	30	Level 1
8	AGR/CRP/C/008/L1	Harvesting and Harvesting procedures	3	30	Level 1
9	AGR/CRP/C/009/L1	Processing andstorage	3	30	Level 1
10	AGR/CRP/C/0010/L1	Transportation and marketing of products	3	30	Level 1
	TOTAL		18	180	

### **GUIDE**

Unit title	Provides a clear explanation of the content of the unit.
Unit number	The unique number assigned to the unit.
Unit reference	The unique reference number given to each unit at qualification approval by NBTE

Unit level	Denotes the level of the unit within the
	National Vocational Qualification
	framework NVQF.
Unit credit value	The value that has been given to the
	unit based on the expected learning
	time for an average learner.
	1 credit = 10 learning hours
Unit aim	Provides a brief outline of the unit
	content.
Learning outcome	A statement of what a learner will
	know, understand or be able to do, as
	a result of a process of learning.
Assessment criteria	A description of the requirements a
	learner must achieve to demonstrate
	that a learning outcome has been met.
Unit assessment guidance	Any additional guidance provided to
j –	support the assessment of the unit.
Unit guided learning hours	The average number of hours of
	supervised or directed study
	time or assessment required to
	achieve a qualification or unit of a
	qualification.

**Qualification: CEREAL CROP PRODUTION** 

QCF level: 1

Credit value: 30

**Guided learning hours:** 30

### **Level Purpose:**

At the end of the Units within, the Learner should be able to:

- 1.Understand the importance of Communication and Team-work at the workplace;
- 2.Know basic safety and health requirements in a workplace
- 3. Demonstrate an understanding of site selection for Cereal crops.
- 4. Carry out land preparation for Cereal crops.
- 5.Understand the basic concepts and principles involves in nursery and planting practices in Cereal crops.
- 6.Understand the fundamentals of Cereal crop management practices.
- 7.Demonstrate understanding of skills involved in harvesting Cereal crops.
- 8. Exhibit understanding of handling, processing and storage
- 9. Demonstrate understanding of Transportation and marketing of Cereal crops/ products.

### Level assessment requirements/evidence requirements

There are eight (8) mandatory units (i.e. Units 1, 2, 4, 5, 6, 7, 8) and three (3) optional units (i.e. units 3, 9, 10) in this level to enable the learner to qualify for QCF Level 2 in Digital Service Operation.

The evidence required in this level includes:

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learners work.
- 7. Assignment

Unit1: OCCUPATIONAL HEALTH AND SAFETY

Unit reference number: AGR/CRP/C/001/LI

QCF level:

Credit value: 2

Guided learning hours: 20

### **Unit Purpose:**

This unit specifies the competencies required to demonstrate understanding of safe work practices. It involves learning about workplace safety, correct use of signs and symbols, identifying and reducing risks of hazards in the work environment and knowing how to protect self from the effects of gaseous, liquid and solid substances;

### Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

### Assessment methods to be used include:

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learners work.
- 7. Assignment

### **UNIT 01: OCCUPATIONAL HEALTH AND SAFETY**

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA		vide vpe	enc	е	Evidence Ref. Page No.				
		The learner can:									
The learner will:											
LO 1:	1.1	Explain safe work practice and instructions									
Demonstrate Safe working	1.2	Identify safety signs and symbol									

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA  The learner can:	 /id/ /pe	enc	е		ef.	enc Paç	_
Practices and	1.3	Use signs and symbols							
Instructions		correctly							
	1.4	Carry out safe work practices and instructions							
	1.5	Work in accordance with health and safety best practices							
LO 2:	2.1	Identify work environment hazards							
Demonstrate Understanding of	2.2	State methods to reduce the risk of these hazards							
Safety Hazards and risks	2.3	Identify Personal Protection Equipment (PPE) eg: Goggles, Boot, Gloves etc.							
	2.3	State methods to resolve an occurring environmental hazard							
LO 3:	3.1	Identify basic first aid equipment							
Possess the ability to take	3.2	State how to maintain hygienic, safe and secure workplace.							
appropriate actions during accident/injury	3.3	State the uses of safety equipment in a workplace as required.							
LO 4:	4.1	Use safe access and exit routes in the work environment							
Demonstrate safe work habit and clean work	4.2	Dispose all wastes appropriately to designated waste facilities							
environment	4.3	Explain methods of resource conservation (eg. Water, Energy etc)							

Learners Signature:	Date:
Assessors Signature:	Date:
IQA Signature (if sampled)	Date:
EQA Signature (if sampled)	Date:

### **Unit2: COMMUNICATION AND INTERPERSONAL SKILLS**

Unit reference number: AGR/CRP/C/002/L1

QCF level: 2

Credit value: 2

**Guided learning hours:** 20

### **Unit Purpose:**

This unit specifies the competencies required to demonstrate good communication and interpersonal skills. It Involves the ability to read and understand documented instructions and the ability to know how to communicate respectfully when in a bad mood or under pressure;

### Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

### Assessment methods to be used include:

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learners work.
- 7. Assignment

### UNIT 02:COMMUNICATIONS AND INTERPERSONAL SKILL

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA  The learner can:			Evidence Type			ef.	ence Pag	_
The learner will:										
LO 1:	1.1	State reasons why good								
		communication is important								
Demonstrate	1.2	List ways to communicate								

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA	Evidence Type				Evidence Ref. Page No.				
The learner will:		The learner can:									
knowledge of the importance	1.3	effectively Exhibit patience and a mild									
of good	1.5	demeanour while communicating									
communication		with colleagues, managers and clients									
	1.4	Speak in a respectful manner									
	1.5	Use respectful body language									
	1.6	Interpret verbal communication accurately									
LO 2:  Demonstrate ability to	2.1	Read and accurately follow steps in a an instruction manual pertaining to any of the units in this course									
document and follow documented	2.2	Document information in the workplace (Eg: Receipt, Invoices, Reports)									
instructions	2.3	Document Errors, solution, processes and reports									

EQA Signature (if sampled)	Date:
IQA Signature (if sampled)	Date:
Assessors Signature:	Date:
Learners Signature:	Date:

### **Unit 3: Site selection**

Unit reference number: AGR/CRP/C/003/L1

QCF level:

Credit value: 4

Guided learning hours: 40

### **Unit Purpose:**

This unit standard specifies the competencies required for the location of a suitable well drained fertile soil, identification of different type of soil and ecological requirement for cereal crops production.

### Unit assessment requirements/evidence requirements

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learners work.
- 7. Assignment

LO (Learning outcome)		Criteria:-		Evidence Type					Evidence Ref Page number			
LO 1 Understand Soil	1.1	Identify rich vegetation area										
and Climatic requirement for	1.2	Identify areas with abundant sunshine										

Cereal crops	1.4	Locate a suitable well drained fertile soil  Identify areas with good rainfall pattern					
LO 2  Demonstrate	2.1	Identify sandy soil					
understanding of soil properties.	2.2	Identify loamy soil					
	2.3	Identify clay soil					
	2.4	Explain differences in the soil types					
	2.5	Describe the physical characteristics of the soil types					

Learners Signature:	Date:
Assessors Signature:	Date:
IQA Signature (if sampled)	Date:
EQA Signature (if sampled)	Date:

### Unit 4: Land Preparation for cereal crop production

Unit Reference Number: AGR/CRP/C/004/LI

QCF level:

Credit value: 3

Guided learning hours: 30

### **Unit Purpose:**

This unit standard specifies the competencies required to deal with the clearing of bushes, stumping trees, and tilling the selected land for nursery and field operation for cereal crops production

### Unit assessment requirements/evidence requirements

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learners work.
- 7. Assignment

LO (Learning out	Criteria:-	Evidence Type			R	vide ef P umb	age		
LO 1  Demonstrate	1.1	Carry out land clearing							
the knowledge of land	1.2	Carryout felling of tree							
Preparation	1.3	Perform stumping of trees and removal of roots and debris on							

		the selected land					
	1.4	Gather the stumps, roots and debris on the field					
	1.5	burn the gathered stumps, roots and debris on the field					
LO 2							
Understand Tillage operations	2.1	Prepare a nursery bed for nursery practice					
	2.2	Recognize a suitable location for nursery					
	2.3	Construct shed for the nursery					
	2.4	Erect the nursery close to a source of water					
	2.5	Plough the field					
	2.6	Harrow the field					
	2.7	Ridge the field					
LO3							
Demonstrate	3.1	Identify various simple farm tools used for land preparation					
understanding of basic farm tools.	3.2	Distinguish between the simple farm tools used for nursery bed preparation.					
	3.3	Carry out simple farm tools maintenance such as oiling of parts, cleaning, washing, etc,					

LO 4						

Learners Signature:	Date:
Assessors Signature:	Date:
IQA Signature (if sampled)	Date:
EQA Signature (if sampled)	Date:

### **Unit 5: Nursery and planting practices**

Unit reference number: AGR/CRP/C/005/L1

QCF level:

Credit value: 3

**Guided learning hours:** 30

### **Unit Purpose:**

This unit standard specifies the competencies required to demonstrate understanding of planting seeds in the nursery and on the field, applying pre-emergence herbicides, basal fertilizers, irrigation when necessary and appropriate planting methods for cereal crops

### Unit assessment requirements/evidence requirements

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learners work.
- 7. Assignment

LO (Learning o	utcom	e) Criteria:-	Evidence Type			R	nce age er	
LO 1	1.1	Dress the seeds						
Demonstrate								
understanding of	1.2	Measure and mark the spacing for						
Planting		individual crops in the nursery and on the field						
operations	1.3	Sow seed in the nursery						

	1.4	Plant seeds on the field				
operations						
	1.5	Use simple irrigation tools such as watering can, water hose, etc				
LO 2						
Demonstrate						
Understanding of Fertilizer and Herbicides Application	2.1	Identify different types of fertilizer				
	2.2	Identify different types of herbicide				
	2.3	Carryout basal, ring method or broadcasting of fertilizer application				
	2.4	Carryout herbicides application				
LO 3	3.1	Apply water in case there is no rainfall after planting				
Demonstrate knowledge of irrigation practices						
	3.2	Select appropriate irrigation tools like; watering can, water hose, etc				
	3.3	Use simple irrigation tools				

LO 4	4.1	Carryout dibbling method of					
Understand		planting					
appropriate							
planting methods	4.2	Carryout drilling method of planting					
	4.3	Select the right planting methods for each Cereal crop					
	4.1	Carryout dibbling method of planting					

Learners Signature:	Date:
Assessors Signature:	Date:
IQA Signature (if sampled)	Date:
EQA Signature (if sampled)	Date:

### **Unit 6: Crop management practices**

Unit reference number: AGR/CRP/C/006/L1

QCF level: 1

Credit value: 3

**Guided learning hours:** 30

### **Unit Purpose:**

This unit standard specifies the competencies required to demonstrate understanding of the practice that deals with thinning of seedlings, supplying of seeds/seedlings, applying fertilizer and herbicides and controlling of pests, diseases and weeds of cereal crops

### Unit assessment requirements/evidence requirements

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learners work.
- 7. Assignment

LO (Learning o	utcome	e) Criteria:-	Ev Ty	iden pe	се		R	vide ef P umb	age	
LO 1	1.1	Thin excess seedlings								
Demonstrate										
thinning of seedlings,	1.2	Supply seeds/ seedlings in missing spots								

supplying of seeds/seedlings	1.3	Distinguish between vigorous and unhealthy seedlings					
LO 2							
	2.1	List different types of fertilizers					
Understand		71					
Fertilizer and herbicides application	2.2	Apply fertilizer on the field					
	2.3	Perform different methods of fertilizer application such as; ring, basal, broadcasting methods, etc					
	2.4	Observe when fibre crops are due for fertilizer application					
	2.5	Carryout pesticides application					
LO 3							
Demonstrate	3.1	Distinguish between weed and fibre crops					
understanding of		_					
Pest, Disease and	3.2	Identify field pests of fiber crops					
weed control							
	3.3	Observe disease conditions on the field					
	3.4	Apply appropriate measures in prevention and control of pests, weeds and diseases fibre crops					
	3.5	Operate simple farm tools in controlling pests, weeds and diseases on the field					
	3.6	Carry out maintenance of simple farm tools such as; knapsack sprayer, hand held sprayer, electrodyne sprayer, etc					
	3.7	Apply safety precautions where necessary					

Learners Signature:	Date:
Assessors Signature:	Date:
IQA Signature (if sampled)	Date:
EQA Signature (if sampled)	Date:

Unit8: Harvesting and harvesting procedures

Unit reference number: AGR/CRP/C/007/L1

QCF level: 1

Credit value: 3

Guided learning hours: 30

### **Unit Purpose:**

This unit standard specifies the competencies required to demonstrate the understanding of the maturity time and signs of maturity and using an appropriate harvesting equipment and right harvesting methods in cereal crops production

### Unit assessment requirements/evidence requirements

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learners work.
- 7. Assignment

LO (Learning o	utcom	e) Criteria:-	Evidence Type			R	Evidence Ref Page number			
LO1 Understanding	1.1	Identify matured <b>Cereal</b> crops								
Maturity Time of Cereal crops	1.2	State the maturity period of Cereal crops								
	1.3	Distinguish between mature and immature Cereal crops								

LO 2							
Harvesting and harvesting	2.1	Operate harvesting simple harvesting tools such as; sickle, cutlass, etc					
procedures	2.2	Use right methods of harvesting individual <b>Cereal</b> crop					
	2.3	Separate <b>Cereal</b> products from crop residues					
	2.4	Carryout bagging of products					
LO 3							

Learners Signature:	Date:
Assessors Signature:	Date:
IQA Signature (if sampled)	Date:
EQA Signature (if sampled)	Date:

### **Unit 8: PROCESSING AND STORAGE PRODUCTS**

Unit reference number: AGR/CRP/ C/008/L1

QCF level: 1

Credit value: 3

**Guided learning hours:** 30

### **Unit Purpose:**

This unit standard specifies the competencies required to demonstrate understanding of the fundamentals of handling, processing, storage and marketing of Cereal Crops and products. The unit describe activities such as cutting, processing, cleaning, bagging and other logistics.

### Unit assessment requirements/evidence requirements

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learners' work.
- 7. Assignment

LO (Learning outcome)		(:riteria:-		Evidence Type			E' R nı		
LO1	1.1	Carryout processing of							
Demonstrate		Cereals crops such as; washing, soaking, retting, etc							
Understanding	1.2	Distinguish between products of							
of Cereals		Cereals crops.							

crops handling	1.3	Carryout bagging of Cereal						
and processing		crops						
		·						
	1.4	Carryout weighing of the bagged products.						
LO 2								
Demonstrate basic Skills in Storage of	2.1	Carryout cleaning of store using simple tools.						
Cereal crops	2.2	Arrange pallets in the store						
LO 3	2.3	Perform stacking of bags in the store						
Transport and marketing of Cereal crops	3.1	Identify right transportation means for Cereal crops						
	3.2	Observe the changes in the warehouse.						
	3.3	Identify market for the products						
	1	1	1				I	

Learners Signature:	Date:
Assessors Signature:	Date:
IQA Signature (if sampled)	Date:

EQA Signature (if sampled)	Date:

### Unit 10: TRANSPORT AND MARKETING OF CEREAL CROPS PRODUCTS

Unit reference number: AGR/CRP/ F/009/L1

QCF level: 1

Credit value: 3

**Guided learning hours:** 30

### **Unit Purpose:**

This unit standard specifies the competencies required to demonstrate understanding of the fundamentals of transportation and marketing of Cereal crops and products.

### Unit assessment requirements/evidence requirements

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learners' work.
- 7. Assignment

LO (Learning outcome)		) Criteria:-	Evide Type		Evidence Type				E R	
LO1 Understand the	1.1	Identify appropriate means of transporting Cereal crops								
transportation	1.2	Choose the right means of transporting Cereal crops.								

of Cereal crop	1.3	Carryout loading of Cereal crops					
products							
	1.4	Carryout offloading of Cereal crops.					
Demonstrate the understanding of	2.1	Sort Cereal crops/products.					
grading/standardi zation of Cereal crop/products	2.2	Weigh Cereal crops/products					
	2.3	Prepare Cereal crops/products for marketing.					
	3.1	Identify the right time to market fiber crops/products					
LO 3	3.2	Identify market for the products					
Understand marketing of Cereal crops/products							
	3.3	Know how to measure the products for marketing					

Learners Signature:	Date:
Assessors Signature:	Date:
IQA Signature (if sampled)	Date:
EQA Signature (if sampled)	Date:

# NATIONAL SKILLS QUALIFICATION

(NSQ)

# CEREAL CROPS PRODUCTION LEVEL 2

### NATIONAL SKILLS QUALIFICATION

### QCF LEVEL 2 – CEREAL CROPS PRODUCTION

### **GENERAL INFORMATION**

### **QUALIFICATION PURPOSE**

This qualification is aimed at developing competence in Cereal Crops Production for youth employment and food security.

### **QUALIFICATION OBJECTIVES**

To achieve this qualification, the farm Supervisor should be able to demonstrate the knowledge of:

- 1. Site selection
- 2. Land preparation for nursery and field
- 3. Nursery and planting practices
- 4. Crop management practices
- 5. Harvesting and harvesting procedures
- 6. Processing and storage
- 7. Transport and marketing of products

## **Mandatory Units**

S/No /Unit No	Reference Number	NOS Title	Credit Value	Guided Learning Hours	Remark
1	AGR/CRP/C/001/L2	Site selection 2	4	40	Level 2
	TOTAL		4	40	

# **Optional Units**

S/No /Unit No	Reference Number	NOS Title	Credit Value	Guided Learning Hours	Remark
2	AGR/CRP/C/002/L2	Land preparations for field	4	40	Level 2
3	AGR/CRP/C/003/L2	Nursery and planting practices	4	40	Level 2
4	AGR/CRP/C/004/L2	Crop management practices	4	40	Level 2
5	AGR/CRP/C/005/L2	Harvesting and Harvesting procedures	4	40	Level 2
6	AGR/CRP/C/006/L2	Processing and storage	4	40	Level 2
7	AGR/CRP/C/007/L2	Transport and Marketing of Cereal crop Products	4	40	Level 2
	TOTAL		24	240	

## **GUIDE**

Unit title	Provides a clear explanation of the content of the unit.
Unit number	The unique number assigned to the unit.
Unit reference	The unique reference number given to each unit at qualification approval by NBTE

Unit level	Denotes the level of the unit within the
	National Vocational Qualification
	framework NVQF.
Unit credit value	The value that has been given to the
	unit based on the expected learning
	time for an average learner.
	1 credit = 10 learning hours
Unit aim	Provides a brief outline of the unit
	content.
Learning outcome	A statement of what a learner will
	know, understand or be able to do, as
	a result of a process of learning.
Assessment criteria	A description of the requirements a
	learner must achieve todemonstrate
	that a learning outcome has been met.
Unit assessment guidance	Any additional guidance provided to
_	support the assessment of the unit.
Unit guided learning hours	The average number of hours of
_	supervised or directed study
	time or assessment required to
	achieve a qualification or unit of a
	qualification.
	qualification.

**Qualification: CEREAL CROPS PRODUCTION 2** 

QCF level: 2

Credit value: 4

Guided learning hours: 40

### **Level Purpose:**

At the end of the Units within, the farm supervisor should be able to:

- 1. Demonstrate an understanding of site selection for Cereal crops.
- 2. Carry out land preparation for Cereal crops.
- 3. Understand the basic concepts and principles involves in nursery and planting practices in Cereal crops.
- 4. Understand the fundamentals of Cereal crop management practices.
- 5. Demonstrate understanding of skills involved in harvesting Cereal crops.
- 6. Exhibit understanding of handling, processing, storage and marketing of Cereal crops/ products.

### Level assessment requirements/evidence requirements

There are eight (8) mandatory units (i.e. Units 1, 2, 4, 5, 6, 7, 8) and three (3) optional units (i.e. units 3, 9, 10) in this level to enable the learner to qualify for QCF Level 2 in Digital Service Operation.

The evidence required in this level includes:

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learners work.
- 7. Assignment

## Unit 1: SITE SELECTION FOR CEREAL CROPS 2

Unit reference number: AGR/CRP/C/003/L2

QCF level: 2

Credit value: 4

Guided learning hours: 40

# **Unit Purpose:**

This unit standard specifies the competencies required to understand how to locate a suitable well drained fertile soil, identification of different type of soil and ecological requirement for Cereal crops production.

### Unit assessment requirements/evidence requirements

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learners work.
- 7. Assignment

LO (Learning outcome)		me) Criteria:-			Evidence Type				R	vide ef P umb	age	
LO 1 Understand Soil and Climatic	1.1	Demonstrate use of survey equipment like ranging poles, theodolites, meter rules, GPS, total station, etc										
requirement for Cereal crops	1.2	Carry out soil test using simple soil kits (pH meter, moisture analyzer, sieves etc)  Perform soil amendments like										

	1.3	liming, organic matter, sterilization, fumigation incorporation if necessary					
	1.4	Distinguish between different types of soil (sand, loam and clay)					
	1.5	Explain the effect of different soil types on crops yield					
	1.6	State the effect of topography on Cereal crops growth					
	0.4						
LO 2 Demonstrate	2.1	List out physical properties of sand, clay and loam soils					
	2.2	List out Chemical properties of		$\dashv$			
understanding of		sand, clay and loam soils					
soil properties.	0.0	5 1 : (6 )		-			
	2.3	Explain effects of these properties in 2.1 and 2.2 above on Cereal crops					
	2.4	Measure effect of each of these properties in 2.1 and 2.2 above on Cereal crops					
LO 3	0.4				_		
Demonstrate understanding	3.1	List out ecological parameters to be considered on Cereal crops					
of ecological requirements	3.2	Outline ecological requirements for each Cereal crop					
	3.3	Measure each of these ecological factors on the field					
	3.4	Explain effect of these ecological factors (temp. rainfall, relative humidity, soil type, photo period etc.) on Cereal crops					

3.5	Describe the adaptations of Cereal crops to climatic elements					
3.6	Observe changes caused by					
	any of these factors on the growth of Cereal crops.					

Learners Signature:	Date:
Assessors Signature:	Date:
IQA Signature (if sampled)	Date:
EQA Signature (if sampled)	Date:

# Unit 2: LAND PREPARATION IN CEREAL CROPS PRODUCTION 2

Unit Reference Number: AGR/CRP/C/002/L2

QCF level: 2

Credit value: 4

Guided learning hours: 40

# **Unit Purpose:**

This unit standard specifies the competencies required in clearing the bushes, stumping trees and tilling the selected land for nursery and field operation for Cereal crops.

# Unit assessment requirements/evidence requirements

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learners' work.
- 7. Assignment

LO (Learning outcome)		Criteria:-	Evidence Type			R	vide ef P umb	age		
LO 1  Demonstrate the	1.1	Identify implements required for each of the operations								
knowledge of land Preparation	1.2	Demonstrate the use of farm implements in land preparation								
	1.3	Estimate man hour required for each farm operation								

	1.4	Determine when each of these operations is needed to be carried out.					
	1.5	Ensure the land is well prepared					
LO 2 Demonstrate the	2.1	Map out different areas for different operations based on the soil/ land characteristics					
understanding of farm lay out,	2.2	Determine plots for each crop					
	2.3	Arrange each crop to suit farming operation					
	2.4	Explain advantages and disadvantages of 2.1 above					

Learners Signature:	Date:
Assessors Signature:	Date:
IQA Signature (if sampled)	Date:
EQA Signature (if sampled)	Date:

## Unit 3: NURSERY AND PLANTING PRACTICES IN CEREAL CROPS 2

Unit reference number: AGR/CRP/C/005/L2

QCF level: 2

Credit value: 4

Guided learning hours: 40

### **Unit Purpose:**

This unit standard specifies the competencies required to demonstrate understanding of planting seeds in the nursery and on the field, applying pre-emergence herbicides, basal fertilizers, irrigation when necessary and appropriate planting methods for Cereal crops

# Unit assessment requirements/evidence requirements

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learners work.
- 7. Assignment

LO (Learning outcome)		e) Criteria:-	Evidence Type				R	nce age er		
LO 1	1.1	Carry out seed viability test								
Plant seeds in the nursery and on the	1.2	State planting methods such as; broadcasting, direct sowing, etc								

field based on the spacing rate and	1.3	Describe the planting methods				
spacing requirements	1.4	Discuss the seed rate on the field				
	1.5	Discuss the spacing requirement on the field				
	2.1	Explain pre-emergence herbicides application in Cereal crop				
	2.2	Calculate rate of herbicides to be applied				
	2.3	Explain basal fertilizer application				
	2.4	Calculate rate of fertilizer to be applied				
LO 3	3.1	Observe period of drought				
Ensure that the field is watered in case there is no rainfall after planting						
	3.2	Calculate water requirement of Cereal crops				
	3.3	Advice on the right irrigation method to adopt				
LOS 4	4.1	State planting methods				
Understand appropriate						

planting methods (dibbling or drilling)							
	4.2	State number of seeds per stand					
	4.3	Measure and mark spacing of Cereal crops.					
	4.4	Determine appropriate planting depth,					
	4.5	Carry out maintenance of planting implements used for the operation					

Learners Signature:	Date:
Assessors Signature:	Date:
IQA Signature (if sampled)	Date:
EQA Signature (if sampled)	Date:

# Unit 4: CROP MANAGEMENT PRACTICES IN CEREAL CROPS 2

Unit reference number: AGR/CRP/C/004/L2

QCF level: 2

Credit value: 4

**Guided learning hours:** 40

### **Unit Purpose:**

This unit standard specifies the competencies required to demonstrate thinning of seedlings, supplying of seeds/seedlings, applying fertilizer and herbicides and controlling of pests, diseases and weeds of Cereal crops. Understanding of key issues in management practices of Cereal crops.

### Unit assessment requirements/evidence requirements

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- Product of the learners work.
- 7. Assignment

LO (Learning o	e) Criteria:-	Evi Ty <sub>l</sub>	iden oe	ce		R	vide ef P umb	age		
LO 1  Demonstrate	1.1	Distinguish between vigorous and unhealthy seedlings								
thinning of	1.2	Explain the reason for carrying out thinning on the field								

seedlings,	1.3	Explain the reason for carrying		п			
supplying of		out supply of missing stands on the field		1			
seeds/seedlings	1.4	Ensure that thinning and supplying is carried out on the field					
LO 2							
Understand Fertilizer and	2.1	Distinguish between pre- emergence and post emergence herbicides.					
herbicides application	2.2	Calculate the rate of herbicides needed on the field					
	2.3	Distinguish between fertilizer forms such as foliar, granules, etc.					
	2.4	Distinguish between fertilizer types such as; organic and inorganic (single and compound).					
	2.5	Calculate rate of fertilizer application		1			
	2.6	State the appropriate methods of fertilizer application to adopt.					
LO 3							
Demonstrate understanding of	3.1	Identify damages caused by each of the pest.					
Pest, Disease and weed control	3.2	Determine the appropriate pest control measures					
	3.3	Observe diseased stands on the field					
	3.4	Determine the appropriate disease control measures such as; rogueing, spraying of chemicals, etc.					
	3.5	Carryout herbicide application to control weed infestation					

3.6	State the economic importance of pest for Cereal crops					
3.6	State the economic importance of disease for Cereal crops					
3.7	State the economic importance of weed for Cereal crops					
3.8	Explain the importance of time in the application of management techniques in Cereal crops					
3.9	Explain the appropriate farm implements for different operations ( knapsack and boom sprayer)					
3.10	Carry out the maintenance of farm implements used for the operations.					

Learners Signature:	Date:
Assessors Signature:	Date:
IQA Signature (if sampled)	Date:
EQA Signature (if sampled)	Date:

#### **Unit 5: HARVESTING AND HARVESTING PROCEDURES 2**

Unit reference number: AGR/CRP/C/005/L2

QCF level: 2

Credit value: 4

Guided learning hours: 40

### **Unit Purpose:**

This unit standard specifies the competencies required to demonstrate understanding of the fundamentals and concepts of maturity time, signs of maturity and using an appropriate harvesting equipment and right harvesting methods of Cereal crops.

# Unit assessment requirements/evidence requirements

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learner's work.
- 7. Assignment

LO (Learning o	utcom	e) Criteria:-	Evi Typ	den be	ce		R	vide ef P umb	age	
LO1	1.1	Explain physiological changes towards maturity in Cereal crops								
Understanding Maturity Time of		towards maturity in ecrear crops								
Cereal crops	1.2	Explain signs of maturity in Cereal								

	1.3	State the time of harvest of Cereal crops					
LO 2							
Demonstrate Harvesting and	2.1	Describe harvesting methods of Cereal crops					
harvesting procedures	2.2	Operate different harvesting implements such as; sickle etc.					
	2.3	Explain the importance of handling during harvesting					
	2.4	Ensure that right implements are used during harvesting.					
	2.5	Carry out the maintenance of harvesting implements					

Learners Signature:	Date:
Assessors Signature:	Date:
IQA Signature (if sampled)	Date:
EQA Signature (if sampled)	Date:

#### **Unit 6: PROCESSING AND STORAGE OF PRODUCTS 2**

Unit reference number: AGR/CRP/C/006/L2

QCF level: 2

Credit value: 4

Guided learning hours: 40

### **Unit Purpose:**

This unit standard specifies the competencies required to demonstrate understanding of the fundamentals of handling, processing, storage and marketing of Cereal crops and products. The unit describe activities such as cutting, processing, cleaning, bagging and other logistics.

## Unit assessment requirements/evidence requirements

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learners' work.
- 7. Assignment

LO (Learning ou	tcome	) Criteria:-	Evi Typ	iden oe	ce		R	vide ef Pa umb	age	
LO1	1.1	Distinguish between various								
Demonstrate		processing methods of Cereal crops such as; threshing,								
Understanding of Cereal		winnowing, parboiling, milling etc.								
crops handling	1.2	Describe methods of handling harvested Cereal crops								

and processing	1.4	Carryout processing of Cereal crops such as; threshing, winnowing, parboiling, milling etc.  State the importance of each of the processes in 1.2 above.  Determine the moisture content and other quality parameters using test					
		kit.					
LO 2							
Demonstrate basic Skills in Storage of Cereal crops	2.1	Describe the different methods of storage of Cereal crops.					
Cerearcrops	2.2	Carryout cleaning and fumigation of store using simple equipment.(mist sprayer, dusters, etc)					
	2.3	Explain the working principles of each equipment used in 2.2 above.					
	2.4	Describe the appropriate methods of storing Cereal crop products.					
	2.5	Distinguish between various products derived from Cereal crops					
LO 3  Transport and	3.1	Identify right transportation means for Cereal crops					
marketing of Cereal crops	3.2	Observe the changes in the warehouse.					
	3.3	Identify market for the products					

Learners Signature:	Date:
Assessors Signature:	Date:
IQA Signature (if sampled)	Date:
EQA Signature (if sampled)	Date:

### **Unit 7: TRANSPORT AND MARKETING OF CEREAL CROP PRODUCTS 2**

Unit reference number: AGR/CRP/C/007/L2

QCF level: 2

Credit value: 4

Guided learning hours: 40

### **Unit Purpose:**

This unit standard specifies the competencies required to demonstrate understanding of the fundamentals of transportation and marketing of Cereal crops and products.

# Unit assessment requirements/evidence requirements

- 1. Questioning
- 2. Direct Observation of the learner's performance
- 3. Recognition of Prior Learning and experience
- 4. Authentic statement/Witness testimony
- 5. Personal statement/reflective account.
- 6. Product of the learners' work.
- 7. Assignment

LO (Learning ou	tcome	) Criteria:-	Evi Typ	den oe	ce		R	vide ef Pa umb	age	
LO1	1.1	Explain appropriate means of								
Understand the		transporting Cereal crops								
transportation	1.2	Describe the means of transporting Cereal crops.								

of Cereal crop products	1.3	Ensure that Cereal crops are properly loaded when transporting.					
LO 2							
Demonstrate the understanding of grading/standardi zation of Cereal	2.1	Explain how to standardize/grade Cereal crops/products for National or International markets.					
crop/products	2.2	Determine the appropriate methods of weighing Cereal crops/products for the market.					
	2.3	Prepare Cereal crops/ products for marketing.					
	2.4	Determine the right time to market Cereal crops/products					
LO 3	3.1	Identify market for the products					
Understand marketing of Cereal crops/ products	3.2	Explain market requirement					
F-344000	3.3	Determine marketing strategies					

Learners Signature:	Date:
Assessors Signature:	Date:
IQA Signature (if sampled)	Date:
EQA Signature (if sampled)	Date:

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