

FEDERAL MINISTRY OF EDUCATION

National Skills Qualifications

FOR

BEEKEEPING PRACTICE

LEVEL 1, 2 & 3

February, 2025

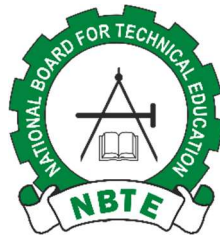


Innovation Development
and Effectiveness in the
Acquisition of Skills
(IDEAS) Project

Funded by IDEAS project

National Board for Technical Education

Plot B, Bida Road, P.M.B. 2239, Kaduna, Nigeria



NATIONAL SKILLS QUALIFICATION

BEEKEEPING PRACTICE:

Apiculture Sector

LEVEL 1-3

FEBRUARY, 2025

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GENERAL INFORMATION

QUALIFICATION PURPOSE

This qualification is aimed at developing competence in Beekeeping production across different platforms. The focus is on Beekeeping production process, communication skills, inter-personal skills development and workplace experience.

QUALIFICATION OBJECTIVES

To achieve this qualification, the learner should gain the following competencies:

- Apply safe working practices in their work environment.
- Communicate effectively in a Beekeeping working environment.
- Work with team in Beekeeping Practice
- Identify Bees and Beekeeping practice in Nigeria.
- Apply Beekeeping method and hive types of practices.
- Observe Bee Keeping Safety and Security.
- Carry out Baiting and Colonization of bees.
- Establish an Apiary for beekeeping.

MANDATORY UNITS

S/No	Reference Number	NOS Title	Credit Value	Guided Learning Hours	Remarks
1	AGR/BKP/001/L1	Work Safely in Beekeeping Environment	2	20	Mandatory
2	AGR/BKP/002/L1	Communicate Effectively in Beekeeping Environment	2	20	Mandatory
3	AGR/BKP/003/L1	Teamwork in Beekeeping Practice	2	20	Mandatory
4	AGR/BKP/004/L1	Fundamentals of Bees and Beekeeping Practice in Nigeria	4	40	Mandatory
5	AGR/BKP/005/L1	Fundamentals of Beekeeping Method and Hive Types	4	40	Mandatory
6	AGR/BKP/006/L1	Establishment of an Apiary for beekeeping	3	30	Mandatory
7	AGR/BKP/007/L1	Fundamentals of Bee Keeping Safety and Security	3	30	Mandatory
8	AGR/BKP/008/L1	Baiting and Colonization	2	20	Mandatory
GRAND TOTAL			22	220	

NOTE:

The minimum credit required for Level I qualification in Beekeeping is 22 credit values.

To achieve this qualification; A Learner is required to achieve 22 credits from above mandatory units.

Each Credit is equivalent to approximate to 10 Guided Learning Hours (GLH). The Learning Hours will therefore consist of the GLH *plus* the independent learning hours of the candidate, which is generally 50% – 150% of the GLH.

NATIONAL SKILLS QUALIFICATION

BEEKEEPING PRACTICE:

Apiculture Sector

LEVEL 1

FEBRUARY, 2025

Unit 1: Work Safely in Beekeeping Environment

Unit Reference Number: AGR/BKP/001/L1

NSQ Level: 1

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of health and safety precaution and avoidance of environmental hazards associated with bee keeping practice.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)

UNIT 01: Work Safely in Beekeeping environment

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA	Evidence Type				Evidence Ref. No.	Page
The learner will:		The learner can:						
LO 1: Work safely in Beekeeping Environment.	1.1	Explain safe work practices along the Beekeeping production value chain						
	1.2	Identify safety signs and symbols in Beekeeping processing facilities						
	1.3	Provide safety signs and symbols correctly						
	1.4	Demonstrate safe work practices and instructions in Beekeeping processing facilities						
	1.5	Operate in accordance with health and safety practices						
LO 2: Comply with safety standards in Beekeeping processing facilities	2.1	Identify work environment hazards						
	2.2	State types of hazards and risks in Beekeeping processing facilities						
	2.3	State safety standards in Beekeeping processing facilities						
	2.4	Use safety tools, materials and equipment in Beekeeping processing facilities						
LO 3: Use personal protective equipment (PPE) in Beekeeping processing facilities	3.1	Identify the types of PPEs						
	3.2	Select appropriate PPE						
	3.3	Demonstrate the use of PPE						
	3.4	Maintain PPE before and after use						
LO 4: Respond to accidents/injury in Beekeeping processing	4.1	Locate first aid facility.						
	4.2	Use basic dressing materials.						
	4.3	Report accident/injury to the appropriate supervisor						
LO 5: Apply safe work habit and clean work environment	5.1	Use safe access in the work environment						
	5.2	Use exit routes in the work environment						

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA	Evidence Type				Evidence Ref. No.	Page No.
The learner will:		The learner can:						
in Beekeeping processing	5.3	Identify appropriate working tools, materials and equipment						
	5.4	Use tools and equipment safely in accordance with the supervisor's instructions						
	5.5	Return all tools, equipment materials for appropriate storage.						
	5.6	Carry out general housekeeping of work environment						
	5.7	Dispose all wastes appropriately to designated waste facilities						
LO 6: Comply with standards of lifting, loading/off-loading and stacking of materials in Beekeeping processing facilities	6.1	Load and offload materials without using mechanical assisted lifting techniques.						
	6.2	Load and offload material using mechanical assisted lifting techniques.						
	6.3	Stack materials correctly						
Learners Signature:			Date:					
Assessors Signature:			Date:					
IQA Signature (if sampled)			Date:					
EQA Signature (if sampled)			Date:					

Unit 2: Communicate Effectively in Beekeeping Environment

Unit Reference Number: AGR/BKP/002/L1

NSQF Level: 1

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of simple communication techniques in Beekeeping farming.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)

UNIT 02: Communicate Effectively in Beekeeping Environment

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.				
LO 1: Apply the use of a non-complex communication system in a work environment	1.1	Use a verbal means to pass on necessary information										
	1.2	Use non-verbal means to convey necessary information										
	1.3	Interpret symbols and signs appropriately										
LO 2: Know the sources of information in a work environment	2.1	Identify the source of information in the work environment										
	2.2	Use the different information flow systems in a work environment										
	2.3	Use information gathered to avoid challenges in a work situation										
	2.4	Report findings appropriately in accordance with laid down procedures in the work environment i.e. Cards, Flip Chart										
	2.5	Use simple communication gadget										
LO 3: Use various means of communication in a work environment	3.1	Locate the various communication equipment in the work environment										
	3.2	Use effectively the various communication equipment in a work environment										
	3.3	Pass information effectively to the right personnel										
	3.4	Follow instructions in line with ethics of the work environment										
Learners Signature:			Date:									
Assessors Signature:			Date:									
IQA Signature (if sampled)			Date:									
EQA Signature (if sampled)			Date:									

UNIT 3: TEAMWORK IN BEEKEEPING PRACTICES

Unit Reference Number: AGR/BKP/003/L1

NSQF Level: 1

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose:

This unit is designed to provide the learner with knowledge of necessary knowledge and skills required to develop team spirit and positive working relationship with colleagues.

Unit Assessment requirement

Assessment of this unit must be at a real practical work environment, simulation is not allowed unless where indicated.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)

Unit 3: Teamwork in Beekeeping Practices

LO (Learning outcome)		Criteria:-	Evidence Type				Evidence Ref Page number			
LO 1 Understand positive working relationship with colleagues	1.1	Explain the need for developing positive working relationship with colleagues								
	1.2	Explain the importance of relating with other people in a way that makes them feel valued and respected								
	1.3	Assist team members in lifting, carrying and stacking bee equipment.								
	1.4	Explain the report procedure to the appropriate personnel when request for assistance fall outside area of responsibility.								
	1.5	Communicate information to colleagues about individual work that may affect team work.								
LO 2 Know the responsibilities within the team.										
	2.1	Describe your own roles and responsibilities within a team								
	2.2	Evaluate individual tasks in line with the team's rules and regulations.								
	2.3	Explain the effectiveness of Participation in teamwork.								
LO.3 Comply with the organisational policy										
	3.1	Explain organizational code of conduct								
	3.2	Explain the organizational standard in bee keeping								
	3.3	Adhere strictly to instructions given by the Management								

Learners Signature:**Date:**

Assessors Signature:

Date:

IQA Signature (if sampled)

Date:

EQA Signature (if sampled)

Date:

Unit 4: Fundamentals of bees and Beekeeping practice in Nigeria

Unit Reference Number: AGR/BKP/004/L1

NSQ Level: 1

Credit Value: 4

Guided Learning Hours: 40

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of beekeeping for effective bee-colony management.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Work Product (WP)
5. Personal statement (PS) or Reflective Practice (RP)
6. Recognition of Prior Learning (RPL)

UNIT 04: Fundamentals of bees and Beekeeping practice in Nigeria

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. No.	Page
The learner will:		The learner can:			
LO 1: Understand Bee Species and Bee casts	1.1	Describe characteristics of bee species			
	1.2	Describe bee casts			
	1.3	Identify bee casts			
LO 2: Understand the Biological Life of Bees	2.1	Explain the biological life of bees			
	2.2	Identify the biological stages of bee development in the 3 casts.			
	2.3	Explain the role of bee space in bee nest			
	2.4	Identify the three sizes of cells in the comb			
LO 3: Understand Division of duties in the bee colony	3.1	Enumerate the duties of the queen			
	3.2	Enumerate the duties of the worker bees			
	3.3	Enumerate the duties of the drones			
LO 4: Understand Communication of bees	4.1	List the chemical stimuli of communication of bees			
	4.2	Describe the mechanical stimuli of communication of bees.			
	4.3	Explain the navigation of bees.			

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

Unit 5: Fundamentals of Beekeeping method and hive types

Unit Reference Number: AGR/BKP/005/L1

NSQ Level: 1

Credit Value: 4

Guided Learning Hours: 40

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of appropriate location for an apiary and hive installation.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Work Product (WP)
5. Personal statement (PS) or Reflective Practice (RP)
6. Recognition of Prior Learning (RPL)

UNIT 05 Fundamentals of Beekeeping method and hive types

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
LO 1: Select preferred beekeeping method	1.1	List beekeeping methods								
	1.2	Differentiate between the beekeeping methods.								
	1.3	Explain the advantages and disadvantages of each beekeeping method.								
	1.4	Select the most suitable beekeeping method.								
	1.5	Carry out beekeeping using the method selected in 1.4								
LO 2: Select preferred type of hives	2.1	List the different types of hives								
	2.2	Identify the types of hives for each method mentioned in 1.3								
	2.3	Select the most suitable hive in accordance with the chosen beekeeping method.								
LO 3: Understand the construction of various types of hives.	3.1	Outline the specifications for the different types of hives.								
	3.2	Describe the construction techniques for various types of hives.								
	3.3	Construct different types of hives.								

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

Unit 6: Establishment of an Apiary for beekeeping

Unit Reference Number: AGR/BKP/006/L1

NSQ Level: 1

Credit Value: 3

Guided Learning Hours: 30

Unit Purpose: This unit is designed to provide the learner with knowledge and skills on management of bees, for effective bee-colony.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Work Product (WP)
5. Personal statement (PS) or Reflective Practice (RP)
6. Recognition of Prior Learning (RPL).

UNIT 06: Establishment of an Apiary for beekeeping

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
LO 1: Prepare for apiary Installation for hives.	1.1	Identify appropriate vegetation area for apiary.								
	1.2	Provide appropriate vegetation area for apiary.								
	1.3	Create a safe path - way in the apiary.								
	1.4	Provide water spots in the apiary.								
	1.5	Create fire tracing outside the apiary.								
	1.6	Identify wind protection area (s)								
	1.7	Identify the appropriate shade area for installation of the hives								
LO 2: Know the procedure of securing the apiary.	2.1	Fence the apiary if possible.								
	2.2	Construct fire-tracing for the apiary								
	2.3	Explain the importance of providing adequate security in the apiary.								
LO 3: Know the preparation of the apiary for proper placement of hives.	3.1	Cut grasses within and around the hive location (s).								
	3.2	Carry out the cutting of low tree branches near the hives.								
	3.3	Provide shade for hives during peak hours of heat.								
LO 4: Carry out the installation of hives.	3.1	Place hives in the apiary								
	3.2	Set the hives in appropriate position								
	3.3	Distance the hives from each other								
	3.4	Provide landmarks for each hive.								
	3.5	Take precautionary measures to protect exposure of hives to pests, diseases and other enemies.								

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

Unit 7: Fundamentals of Bee Keeping Safety and Security

Unit Reference Number: AGF/BKP/007/L1

NSQ Level: 1

Credit Value: 3

Guided Learning Hours: 30

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of apiary security and personal safety rules and precautions.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)

UNIT 07: Fundamentals of Bee Keeping Safety and Security

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
LO1: Use protective gears correctly.	1.2	Identify the types of protective gears								
	1.3	Inspect the condition of the protective gears								
	1.4	Wear the protective gears								
	1.5	Demonstrate the maintenance of protective gears.								
LO 2: Use smoker with appropriate and adequate fuel.	2.1	Explain the functions of smoker								
	2.2	Confirm the functionality of smoker								
	2.3	Select the appropriate and adequate amount of fuel for the smoker.								
	2.4	Light up the smoker.								
	2.5	Use the functional smoker.								
LO 3: Smoke hives adequately before inspection.	3.1	Observe the kind of smoke produced from the smoker.								
	3.2	Monitor the reaction of the bees during smoking.								
	3.3	Explain the dos and don'ts of smoking the bees.								
LO 4: Carryout purposeful actions during bee inspection.	4.1	Describe the purpose of inspection of each beehive.								
	4.2	Explain the procedures for inspection.								
	4.3	Inspect beehives according to laid down procedures.								
	4.4	Handle the combs gently and be time conscious.								
	4.5	Avoid exposure of combs to sun, bee robbers and other enemies.								

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
LO 5: Secure the apiary	5.1	Explain the importance of fencing apiary								
	5.2	Describe various methods of fencing the apiary.								
	5.3	Explain the Importance of engaging security personnel to guard the apiary.								
	5.4	List possible causes of fire hazards in the apiary.								
	5.5	State fire tracing methods								
	5.6	Carry out fire tracing' methods								
	5.7	Describe fire beaters								
	5.8	List fire extinguishing equipment and tools such as: <ul style="list-style-type: none"> ➤ Fire hoses ➤ Fire hydrants ➤ Nozzies and tips ➤ Fire trucks ➤ Fire pumps ➤ Ladders 								
	5.9	Identify fire extinguishers such as: <ul style="list-style-type: none"> ➤ Water extinguisher ➤ Foam extinguisher ➤ Dry chemical extinguisher ➤ Halon extinguisher etc 								
	5.10	Identify fire extinguishing materials.								
	5.11	Demonstrate the use of fire extinguishing materials to put off fire.								
LO 6: Acquire basic first aid skills and the first aid supplies.	6.1	Explain the Importance of first aid in beekeeping.								
	6.2	List first aid interventions needed for various beekeeping accidents.								

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type						Evidence Ref. Page No.		
	6.3	Identify the basic first aid supplies for beekeeping accidents									
	6.4	Demonstrate the use of first aid methods and supplies.									

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

Unit 08: Baiting and Colonization

Unit Reference Number: AGF/BKP/005/L1

NSQ Level: 1

Credit Value: 2

Guided Learning Hours: 10

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of methods and materials for baiting and colonization of a hive.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)

UNIT 08: Baiting and Colonization

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.				
LO 1: Select the preferred method of baiting	1.1	Explain baiting										
	1.2	List the methods of baiting in accordance with the types of hive being used for beekeeping.										
	1.3	Explain the preferred method of baiting.										
		Identify baiting tools										
LO 2: Prepare the baiting materials and tools.	2.1	Identify the baiting materials										
	2.2	Select preferred baiting materials.										
	2.3	Prepare the baiting materials										
LO 3: Apply the baiting materials to the bee trap.	3.1	Apply baiting materials to bee trap or hive.										
	3.2	Observe the hive or bee trap										
	3.3	Maintain bee trap.										
LO 4: Place the baited hives/bee traps appropriately.	4.1	Determine the appropriate position to place the bee trap or hive.										
	4.2	Observe the rules for appropriate placement of bee trap or hive.										
	4.3	Demonstrate placement of baited bee traps or hives appropriately										
LO 5: Inspect the bee trap weekly.	5.1	Explain the importance of inspecting the bee trap weekly.										
	5.2	Inspect the baited trap										
	5.3	Carry out routine inspection of baited trap.										
LO 6: Source colonies from other sources	6.1	List the sources of obtaining bee colonies										
	6.2	Identify the sources of obtaining colonies										

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.				
such as the natural nests of bees or 'packaged bees.	6.4	Select the sources of obtaining bee colonies.										
	6.5	Obtain bee colonies from their natural habitats										
	6.6	List possible sources for obtaining packaged bees										
	6.7	Identify the cost of each source of packaged bees.										
	6.8	Select the source of obtaining packaged bees										
LO 7: Transplant the trapped colony to the permanent hive if needed.	7.1	Observe the bee trap to confirm if colonization has taken place.										
	7.2	Prepare the permanent hive and other materials for transplant.										
	7.3	Transplant obtained colonies and combs to the permanent hive.										
Learners Signature:			Date:									
Assessors Signature:			Date:									
IQA Signature (if sampled)			Date:									
EQA Signature (if sampled)			Date:									

NATIONAL SKILLS QUALIFICATION

BEEKEEPING PRACTICE:

Apiculture Sector

LEVEL 2

FEBRUARY, 2025

GENERAL INFORMATION

QUALIFICATION PURPOSE

This qualification is aimed at developing competence in Beekeeping production across different platforms. The focus is on Beekeeping production process, harvesting, record keeping communication skills, inter-personal skills development and workplace experience.

QUALIFICATION OBJECTIVES

To achieve this qualification, the learner should gain the following competencies:

- Apply safe working practices in their work environment.
- Communicate effectively in a Beekeeping working environment.
- Work with team in Beekeeping Practice
- Carry out Inspection of hives.
- Carry out colony division.
- Carry out the Swarming procedures.
- Carry out procedures of feeding Bees.
- Carry out Bee Transfusion.
- Transport Bee.
- Apply Honey bee Pest and Disease Control
- Carry out Queen Rearing
- Harvest and process honey.

MANDATORY UNITS

S/No	Reference Number	NOS Title	Credit Value	Guided Learning Hours	Remarks
1	AGR/BKP/001/L2	Work Safely in Beekeeping Environment	2	20	Mandatory
2	AGR/BKP/002/L2	Communicate Effectively in Beekeeping Environment	2	20	Mandatory
3	AGR/BKP/003/L2	Teamwork in Beekeeping Practice	2	20	Mandatory
4	AGR/BKP/004/L2	Inspection of hives	2	20	Mandatory
5	AGR/BKP/005/L2	Colony division.	2	20	Mandatory
6	AGR/BKP/006/L2	Swarming procedures	2	20	Mandatory
7	AGR/BKP/007/L2	Procedures of feeding Bees.	4	40	Mandatory
8	AGR/BKP/008/L2	Bee Transfusion	4	40	Mandatory
9	AGR/BKP/009/L2	Bee Transportation	3	30	Mandatory
10	AGR/BKP/010/L2	Honey bee Pest and Disease Control	2	20	Mandatory
11	AGR/BKP/011/L2	Queen Rearing	1	10	Mandatory
12	AGR/BKP/012/L2	Honey harvesting method and equipment	2	20	Mandatory
GRAND TOTAL			28	280	

Unit 1: Work Safely in Beekeeping Environment**Unit Reference Number:** AGR/BKP/001/L2**NSQ Level:** 2**Credit Value:** 2**Guided Learning Hours:** 20

Unit Purpose: This unit is designed to provide the learner with knowledge of health and safety precaution and avoidance of environmental hazards associated with bee keeping practice.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)

UNIT 01: Work Safely in Beekeeping environment

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
LO 1: Work safely in Beekeeping Environment.	1.1	Explain safe work practices along the Beekeeping production value chain									
	1.2	Identify safety signs and symbols in Beekeeping processing facilities									
	1.3	Provide safety signs and symbols correctly									
	1.4	Demonstrate safe work practices and instructions in Beekeeping processing facilities									
	1.5	Operate in accordance with health and safety practices									
LO 2: Comply with safety standards in Beekeeping processing facilities	2.1	Identify work environment hazards									
	2.2	State types of hazards and risks in Beekeeping processing facilities									
	2.3	State safety standards in Beekeeping processing facilities									
	2.4	Use safety tools, materials and equipment in Beekeeping processing facilities									
LO 3: Use personal protective equipment (PPE) in Beekeeping processing facilities	3.1	Identify the types of PPEs									
	3.2	Select appropriate PPE									
	3.3	Demonstrate the use of PPE									
	3.4	Maintain PPE before and after use									
LO 4: Know accidents/injury in Beekeeping processing	4.1	Locate first aid facility.									
	4.2	Use basic dressing materials.									
	4.3	Report accident/injury to the appropriate supervisor									
LO 5:	5.1	Use safe access in the work environment									

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.	
Apply safe work habit and clean work environment in Beekeeping processing	5.2	Use exit routes in the work environment							
	5.3	Identify appropriate working tools, materials and equipment							
	5.4	Use tools and equipment safely in accordance with the supervisor's instructions							
	5.5	Return all tools, equipment materials for appropriate storage.							
	5.6	Carry out general housekeeping of work environment							
	5.7	Dispose all wastes appropriately to designated waste facilities							
LO 6: Comply with standards of lifting, loading/off-loading and stacking of materials in Beekeeping processing facilities	6.1	Load and offload materials without using mechanical assisted lifting techniques.							
	6.2	Load and offload material using mechanical assisted lifting techniques.							
	6.3	Stack materials correctly							
Learners Signature:			Date:						
Assessors Signature:			Date:						
IQA Signature (if sampled)			Date:						
EQA Signature (if sampled)			Date:						

Unit 2: Communicate Effectively in Beekeeping Environment

Unit Reference Number: AGR/BKP/002/L2

NSQF Level: 2

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of communication techniques in Beekeeping farming.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)

UNIT 02: Communicate Effectively in Beekeeping Environment

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.				
LO 1: Apply the use of a non-complex communication system in a work environment	1.1	Use a verbal means to pass on necessary information										
	1.2	Use non-verbal means to convey necessary information										
	1.3	Interpret symbols and signs appropriately										
LO 2: Know the sources of information in a work environment	2.1	Identify the source of information in the work environment										
	2.2	Use the different information flow systems in a work environment										
	2.3	Use information gathered to avoid challenges in a work situation										
	2.4	Report findings appropriately in accordance with laid down procedures in the work environment i.e. Cards, Flip Chart										
	2.5	Use simple communication gadget										
LO 3: Use various means of communication in a work environment	3.1	Locate the various communication equipment in the work environment										
	3.2	Use effectively the various communication equipment in a work environment										
	3.3	Pass information effectively to the right personnel										
	3.4	Follow instructions in line with ethics of the work environment										
Learners Signature:			Date:									
Assessors Signature:			Date:									
IQA Signature (if sampled)			Date:									
EQA Signature (if sampled)			Date:									

UNIT 3: TEAMWORK IN BEEKEEPING PRACTICES

Unit Reference Number: AGR/BKP/003/L2

NSQF Level: 2

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose:

This unit is designed to provide the learner with knowledge of necessary knowledge and skills required to develop team spirit and positive working relationship with colleagues.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)

Unit 3: Teamwork in Beekeeping Practices

LO (Learning outcome)		Criteria:-	Evidence Type				Evidence Ref Page number			
LO 1 Understand positive working relationship with colleagues	1.1	Explain the need for developing positive working relationship with colleagues								
	1.2	Explain the importance of relating with other people in a way that makes them feel valued and respected								
	1.3	Assist team members in lifting, carrying and stacking bee equipment.								
	1.4	Explain the report procedure to the appropriate personnel when request for assistance fall outside area of responsibility.								
	1.5	Communicate information to colleagues about individual work that may affect team work.								
LO 2: Know the responsibilities within the team										
	2.1	Describe your own roles and responsibilities within a team								
	2.2	Evaluate individual tasks in line with the team's rules and regulations.								
	2.3	Explain the effectiveness of Participation in teamwork.								
LO.3 Comply with the organisational policy										
	3.1	Explain organizational code of conduct								
	3.2	Explain the organizational standard in bee keeping								
	3.3	Adhere strictly to instructions given by the Management								

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

Unit 04: Inspection of hives.**Unit Reference Number: AGF/BKP/004/L2****NSQ Level: 2****Credit Value: 2****Guided Learning Hours: 20**

Unit Purpose: This unit is designed to provide the learner with knowledge and skills on the techniques of hive inspection in bee keeping practice.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)

UNIT 04: INSPECTION OF HIVES

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. No.	Page				
LO 1: Wear protective gears for hive inspection	1.1	Put on protective gears										
	1.2	Observe the hive entrance										
	1.3	Observe bees- movement or mortality outside the hive										
	1.4	Explain the importance of observing bee movement or mortality outside the hive										
LO 2: Smoke the hive and open it	2.1	Observe bee clusters during smoking										
	2.2	Explain the importance of bee clusters										
	2.3	Describe the methods of opening the hive										
	2.4	Use the methods to open the hive										
LO 3: Know the information about the condition of the colony and hive.	3.1	Recognise the presence of the queen or fresh eggs										
	3.2	Explain the importance of the presence of the queen or fresh eggs										
	3.3	Ascertain the performance of the queen										
	3.4	Explain the importance of the performance of the queen.										
	3.5	Ascertain if there are signs of impending swarming										
	3.6	Explain the importance of preventing swarming										
	3.7	Ascertain the presence or absence of honey and provisions.										
	3.8	Verify the presence of any enemies in the hive										
	3.9	Explain the importance of appropriate actions against any existing enemies in the hive										
	3.10	Ascertain the presence of fully capped honey combs for harvesting										
	3.11	Explain the importance of capped honey combs for harvesting										

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. No.	Page
LO 4: Perform necessary action/ manipulation	4.1	Explain the importance of timely intervention/manipulation in accordance with the observations during inspection.							
	4.2	Carry out timely intervention in accordance with the observations during inspection.							
	4.3	Carry out manipulation in accordance with the observations during inspection.							
Learners Signature:			Date:						
Assessors Signature:			Date:						
IQA Signature (if sampled)			Date:						
EQA Signature (if sampled)			Date:						

Unit 05: Colony division.

Unit Reference Number: AGF/BKP/005/L2

NSQ Level: 2

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of colony division in bee keeping practice.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)

UNIT 05: Colony division.

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
LO 1: Prepare the starter colony for splitting	1.1	Explain stater colony								
	1.2	Split colony								
	1.3	Strengthen the population of the starter colony by feeding.								
	1.4	Remove any pest and enemies from the starter colony.								
	1.5	Put the combs back in order								
LO 2: Cage queen bee.	2.1	Identify queen cage								
	2.2	Describe method of locating queen								
	2.3	Explain reasons for caging the queen								
	2.4	Locate queen bee inside hive								
	2.5	Cage queen bee in the hive								
LO 3: Acquire new hive to accommodate the split colony	3.1	Explain ways of obtaining new hives for colony division.								
	3.2	Explain methods of placing new hive near old hive for colony division								
	3.3	Explain procedure on how to transfer bees into new hive.								
LO 4: Split the colonies.	4.1	List the methods of splitting colony.								
	4.2	Explain splitting methods and procedures of splitting colony								
	4.3	Carry out procedures for splitting colonies								
Learners Signature:			Date:							
Assessors Signature:			Date:							
IQA Signature (if sampled)			Date:							
EQA Signature (if sampled)			Date:							

Unit 06: Swarming Procedures

Unit Reference Number: AGF/BKP/006/L2

NSQ Level: 2

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of prevention and control of swarming for good hive management.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)

UNIT 06: Swarming Procedures

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.				
LO 1: Inspect the combs for signs of swarming.	1.1	Identify the signs of swarming on the combs										
	1.2	Explain the signs of swarming on the combs										
	1.3	Describe impact of swarming										
LO 2: Identify the possible causes of swarming.	2.1	List the possible causes of swarming										
	2.2	Explain the possible causes of swarming										
	2.3	Describe the behavior of bees during swarming										
LO 3: Take appropriate actions to prevent or abort swarming.	3.1	List the appropriate steps to be taken to prevent swarming.										
	3.2	Describe the appropriate steps to be taken to prevent swarming.										
	3.3	Carry out steps to prevent swarming										
	3.4	Abort swarming.										

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

Unit 07: Procedures of feeding Bees.**Unit Reference Number:** AGF/BKP/007/L2**NSQ Level:** 2**Credit Value:** 4**Guided Learning Hours:** 40

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of feeding the bees.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)

UNIT 07: Procedures of feeding Bees

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
LO 1: Evaluate the feeding needs of each hive	1.1	Inspect each hive								
	1.2	Identify the feeding needs of each colony								
	1.3	Explain stimulatory feeding								
LO 2: Determine the appropriate season and time for feeding the bees:	2.1	Assess the weather for drought								
	2.2	Identify the appropriate seasons to feed bees.								
	2.3	Identify the appropriate time to feed bees.								
	2.4	Provide bee food for the bees immediately after every manipulation								
LO 3: Select the appropriate types of feed and types of feeders for bees	3.1	List the types of feed and feeders for bees								
	3.2	Identify the various types of bee feed and feeders								
	3.3	Explain which type of bee feed is appropriate for each situation								
LO 4: Feed the bees using selected feed and feeder for bees.	4.1	Prepare the chosen bee feed								
	4.2	Carry out feeding the bees using the different types of bee feed and feeders.								
	4.3	Monitor bee activity and response to Feed, including: <ul style="list-style-type: none"> ➤ Observing bee behaviour and activity at the feeder ➤ Checking for signs of disease or pest. ➤ Evaluating the effectiveness of the feed. 								
	4.4	Adjust feed and feeder placement as needed, including: <ul style="list-style-type: none"> ➤ Changing the type or quantity of feed. ➤ Moving feeders to a different location within the apiary. ➤ Adjusting the frequency of feeder maintenance. 								

LO 5: Maintain the bee feeders	5.1	Explain the importance of cleaning and maintaining the bee feeders										
	5.2	Maintain the bee feeders, including: Cleaning and sanitizing										
	5.3	Ensure feeders are secured and accessible to bees										
Learners Signature:			Date:									
Assessors Signature:			Date:									
IQA Signature (if sampled)			Date:									
EQA Signature (if sampled)			Date:									

Unit 08: Bee Transfusion

Unit Reference Number: AGF/BKP/008/L2

NSQ Level: 2

Credit Value: 4

Guided Learning Hours: 40

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of Bees Transfusion

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)

UNIT 08: Bee Transfusion

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
LO 1: Select the appropriate methods of bee transfusion	1.1	Explain Bee Transfusion.								
	1.2	Identify the need for bee transfusion, considering factors such as: <ul style="list-style-type: none"> ➤ Colony strain and health ➤ Queen bee performance or presence. ➤ Diseases or pest outbreaks. 								
	1.3	List method of bee transfusion.								
	1.4	State the advantages and disadvantages of each method.								
	1.5	Demonstrate each method of bee transfusion.								
	1.6	Select the transfusion method to be used.								
LO 2: Prepare the necessary equipment and materials for transfusion	2.1	Identify equipment and material for bee transfusion.								
	2.2	Prepare bee suit and veil								
	2.3	Prepare smoker and fuel.								
	2.4	Prepare transfusion bee.								
LO 3: Identify the “receiving” hive.	3.1	Identify the colonies that require bee transfusion.								
	3.2	Prioritise the needs of each colony								
	3.3	Observe the bee reaction to the transfusion								
LO 4: Prepare the “receiving hive” for bee transfusion.	4.1	List the steps for preparation of ‘receiving hive’ for bee transfusion.								
	4.2	Prepare ‘receiving hive’ for bee transfusion								
	4.3	Recognize the step for the donor hive to the receiver hive								
LO 5:	5.1	Identify strong colonies.								

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.				
Select the procedure of donor hives	5.2	Collect appropriate quantity of bees from donor hives.										
	5.3	Observe the reaction of bees collected.										
	5.4	Infuse the colony into the new hive and feed the bees										
LO 6: Observe precautionary measures for bee transfusion.	6.1	List the precautionary measures										
	6.2	Explain the importance of precautionary measures.										
	6.3	Observe precautionary measures for bee transfusion.										
LO 7: Perform bee transfusion using the selected method.	7.1	Explain hygiene measures for collection of specimens of dead or diseased bees for testing.										
	7.2	Observe hygiene while collecting specimens of dead or diseased bees for testing.										
	7.3	Package specimens appropriately.										
Learners Signature:			Date:									
Assessors Signature:			Date:									
IQA Signature (if sampled)			Date:									
EQA Signature (if sampled)			Date:									

Unit 09: Bee Transportation

Unit Reference Number: AGF/BKP/009/L2

NSQ Level: 2

Credit Value: 3

Guided Learning Hours: 30

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of bee transportation.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)

UNIT 09: Bee Transportation

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
LO 1: Prepare bees for transportation	1.1	Prepare bees for transportation, ensuring: <ul style="list-style-type: none"> ➤ Bees are healthy and free from diseases. ➤ Queen bee is secured and protected. ➤ Colony is calm and minimized destruction. 								
	1.2	Select suitable transportation equipment, including: <ul style="list-style-type: none"> ➤ Bee escape or clearing device. ➤ Transportation case of boxes ➤ Ventilation and shading materials 								
	1.3	Secure transportation equipment for transit, ensuring: <ul style="list-style-type: none"> ➤ The equipment is properly packed and secured. ➤ Bees are protected from wind, sun, and rain. ➤ Equipment is securely labelled and identified. 								
LO 2: Select method of transporting the bee colony	2.1	Outline the methods of colony transportation								
	2.2	Describe the methods of colony transportation								
	2.3	Identify the methods suitable for each transportation process.								
LO 3: List the necessary precautions for colony transportation	3.1	Outline the precautionary measures for colony transportation.								
	3.2	Prepare the vehicle and the escorts for the transportation of colonies								
	3.3	Prepare the hand sprayer for the bees								

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
	3.4	Describe the procedure for using the hand sprayer on the bees while transporting		
LO 4: Prepare the new site for placement of the transported colonies	4.1	Place each hive stand at the appropriate distance in the new site.		
	4.2	Place the new hive entrance to align with the receiver donor hive.		
	4.3	Prepare the operation in sequence order.		
LO 5: Transport the colonies to the new site	5.1	Provide the essential needs of the bees while transporting the colonies		
	5.2	Apply the necessary safety precautions for transporting the colonies.		
	5.3	Load the hives appropriately on the vehicle		
	5.4	Transport hives to the new site.		
LO 6: Place the transported bee colony properly in the new site.	6.1	Transfuse the transported bee colony appropriately into the hive in the new site.		
	6.2	Feed the bees.		
	6.3	Open the hive's entrance to release the bees when appropriate.		
Learners Signature:			Date:	
Assessors Signature:			Date:	
IQA Signature (if sampled)			Date:	
EQA Signature (if sampled)			Date:	

Unit 10: Honey bee Pest and Disease Control

Unit Reference Number: AGF/BKP/010/L2

NSQ Level: 2

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: This unit is designed to provide the learner with knowledge of and skills of how to prevent diseases, pests and poisons from infesting the colonies/hives and possible treatment and other interventions for affected colonies.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)

UNIT 10: Honey bee Pest and Disease Control

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
LO 1: Identify the bee pests, diseases and possible sources of poisons in the colonies	1.1	Inspect the bees, frames, combs and brood for presence of disease or pest infestation.								
	1.2	Identify infected or infested bee colonies.								
	1.3	Identify poisoned bee colonies.								
LO 2: Determine the most appropriate method of pest and disease control to employees.	2.1	List the methods of pest and disease control								
	2.2	Explain each method of pest and disease control								
	2.3	Identify the various bee pests								
	2.4	Identify the signs and symptoms of bee diseases								
LO 3: Apply the preventive measures against entry of pests into the hives.	3.1	List the measures for prevention of pests in hive.								
	3.2	Explain the methods for prevention of pests in hive.								
	3.3	Demonstrate the methods of prevention of pests in the hive.								
	3.4	Apply the methods of prevention of pests in the hive.								
LO 4: Apply the preventive measures against entry of diseases into colonies.	4.1	List the diseases of the brood and adult-bees.								
	4.2	Explain the characteristics and mode of transfer of brood and adult-bee diseases.								
	4.3	Explain the various methods of prevention and treatment of brood and adult-bee diseases.								
	4.4	Demonstrate the methods of prevention and treatment of brood and adult-bee diseases.								
	4.5	Apply the methods of prevention treatment of brood and adult-bee diseases.								

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
LO 5: Apply the preventive measures against poisoning of colonies.	5.1	Identify signs and symptoms of bee poisoning.		
	5.2	Remove possible sources of poisons from and around the apiary.		
	5.3	Provide clean water in the apiary.		
	5.4	Place the hives away from harmful environment (eg. Areas of industrial chemicals or agrochemicals.)		
	5.5	Apply hygienic measures when feeding the bees		
LO 6: Detect pests and diseases in the colony	6.1	Explain the manifestations of various pests and how they affect bee colonies and bee products.		
	6.2	Identify possible manifestations of various pests in a colony.		
	6.3	Explain the manifestations of various diseases and how they affect bee colonies and bee products.		
	6.4	Identify possible manifestations of various diseases in a colony.		
LO 7: Treat detected bee diseases	7.1	Apply the appropriate and available treatment to infected bee colonies.		
	7.2	Take the necessary preventive measures for the transfer of disease to other colonies.		
	7.3	Inspect the treated colonies and verify their response to the treatment		

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

Unit 11: Queen Rearing**Unit Reference Number: AGF/BKP/011/L2****NSQ Level: 2****Credit Value: 1****Guided Learning Hours: 10****Unit Purpose:** This unit is designed to provide the learner with knowledge and skills of Rearing Queen.**Unit assessment requirements/evidence requirements:**

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)

UNIT 11: Queen Rearing

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
LO 1: Identify potential Queen donor colony.	1.1	Explain the various methods of producing queens								
	1.2	Explain the various methods for producing queens								
	1.3	Demonstrate the various methods of producing queens								
	1.4	Explain the advantages and disadvantages of each method								
	1.5	Select most appropriate method to use								
	1.6	Inspect the starter colony to identify queen traits								
	1.7	Identify strong starter and nursing colonies								
	1.8	Identify nucleus colonies								
LO 2: Prepare the necessary tools for queen larvae transplant.	2.1	Identify larvae transplant equipment/tools								
	2.2	Explain the functions of larvae transplant equipment/tools								
	2.3	Explain queen larvae transplanting methods								
	2.4	Use larvae transplant equipment/tools to transplant larvae								
LO 3: Select queen cells	3.1	Explain types of queen cell stages								
	3.2	Identify queen cell stages								
	3.3	Explain importance of queen cells to queen rearing								
	3.4	Explain queen cells/ larvae transplanting procedures								
	3.5	Explain egg brooding days.								
	3.6	Explain egg to brooding stages.								
LO 4:	4.1	List the actions to be taken and their specific time								

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. No.				Page No.			
Design timetable of actions on queen rearing	4.2	Explain the importance to time adherence												
	4.3	Draw out timetable specified actions to be taken at any specific time.												
LO 5: Know the contributory factors during queen rearing	5.1	Explain how the contributory factors affect the quality of the produced queens												
	5.2	Observe the contributory factors to produce strong queens												
	5.3	Observe the reaction after queen rearing.												

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

Unit 12: Honey harvesting method and equipment

Unit Reference Number: AGF/BKP/012/L2

NSQ Level: 2

Credit Value: 1

Guided Learning Hours: 10

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of Honey harvesting method and equipment.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)

UNIT 12: Honey harvesting method and equipment

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA	Evidence Type					Evidence Ref. Page No.			
The learner will:		The learner can:									
LO 1 Know the process of honey harvesting.	1.1	Explain the importance of proper honey harvesting and processing techniques.									
	1.2	Describe the different types of honey and their characteristics.									
	1.3	Identify common pests and diseases that can affect honey quality.									
	1.4	Explain the importance of quality control and safety in honey harvesting and processing.									
LO 2 Carry out proper Honey Harvesting:	2.1	Identify the signs of a honey flow and determine when to harvest honey.									
	2.2	Prepare the bee colony for honey harvesting, ensuring the queen is secure and the bees are calm.									
	2.3	Extract honey from the honeycomb using manual or mechanical extractors, minimizing damage to the comb.									
	2.4	Handle honey in a way that maintains its quality, purity, and safety for human consumption.									
LO 3: Use Beekeeping Equipment:	3.1	Identify beekeeping equipment, including: ➤ Hives ➤ Frames ➤ Extractors ➤ protective clothing.									
	3.2	Assemble and disassemble beekeeping equipment correctly, ensuring all parts are secure and functional.									
	3.3	Use beekeeping equipment safely and efficiently, following best practices and manufacturer instructions.									

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA	Evidence Type				Evidence Ref. Page No.			
The learner will:		The learner can:								
	3.4	Troubleshoot common issues with beekeeping equipment, performing repairs or replacements as needed.								
LO 4: Observe Safety and Best Practices:	4.1	Demonstrate awareness of potential hazards associated with honey harvesting and beekeeping equipment, taking steps to mitigate risks.								
	4.2	Follow best practices for beekeeping, including: <ul style="list-style-type: none"> ➤ integrated pest management. ➤ disease control. ➤ environmental sustainability. 								
	4.3	Maintain accurate records of honey harvesting, equipment maintenance, and bee colony health.								
	4.4	Participate in continuous learning and professional development to stay up to date with industry developments and best practices.								
LO 5: Package Honey accurately	5.1	Clean honey to remove impurities and debris.								
	5.2	Package honey in a way that maintains its quality and purity.								
	5.3	Label honey containers accurately, including information on the honey's origin and quality.								
	5.4	Store honey in a way that maintains its quality and purity, including controlling temperature and humidity.								
LO 6: Observe Quality Control on honey.	6.1	Conduct basic quality control checks on honey, including: <ul style="list-style-type: none"> ➤ testing for moisture content. ➤ purity. 								

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA	Evidence Type					Evidence Ref. Page No.				
The learner will:		The learner can:										
	6.2	Respond to potential safety hazards when harvesting and processing honey.										
	6.3	Follow proper sanitation and hygiene practices when handling honey and equipment.										
	6.4	Maintain accurate records of honey harvesting, processing, and quality control.										
Learners Signature:			Date:									
Assessors Signature:			Date:									
IQA Signature (if sampled)			Date:									
EQA Signature (if sampled)			Date:									

NATIONAL SKILLS QUALIFICATION

BEEKEEPING PRACTICE:

Apiculture Sector

LEVEL 3

FEBRUARY, 2025

GENERAL INFORMATION

QUALIFICATION PURPOSE

This qualification is aimed at developing competence in Beekeeping production across different platforms. The focus is on Beekeeping production process, harvesting, record keeping communication skills, inter-personal skills development and workplace experience.

QUALIFICATION OBJECTIVES

To achieve this qualification, the learner should gain the following competencies:

- Apply safe working practices in their work environment.
- Communicate effectively in a Beekeeping working environment.
- Work with team in Beekeeping Practice
- Carry out Inspection of hives.
- Carry out colony division.
- Carry out the Swarming procedures.
- Carry out procedures of feeding Bees.
- Carry out Bee Transfusion.
- Transport Bee.
- Apply Honey bee Pest and Disease Control
- Carry out Queen Rearing
- Harvest and process honey.
- Work Safely in Beekeeping Environment.
- Communicate Effectively in Beekeeping Environment.
- Work in team in Beekeeping Practice.
- Apply honey harvesting and processing.
- Carry out production and storage of other bee-products.
- Carry out harvesting of other Bee by-products.
- Carry out Packaging of Bee By-Products.
- Apply Cross Pollination Services.
- Keep Record

MANDATORY UNITS

S/No	Reference Number	NOS Title	Credit Value	Guided Learning Hours	Remarks
1	AGR/BKP/001/L3	Work Safely in Beekeeping Environment	3	20	Mandatory
2	AGR/BKP/002/L3	Communicate Effectively in Beekeeping Environment	3	20	Mandatory
3	AGR/BKP/003/L3	Teamwork in Beekeeping Practice	3	20	Mandatory
4	AGR/BKP/004/L3	Honey harvesting and processing	4	40	Mandatory
5	AGR/BKP/005/L3	Production and storage of other bee-products	5	50	Mandatory
6	AGR/BKP/006/L3	Harvesting of other Bee by-products	5	50	Mandatory
7	AGR/BKP/007/L3	Packaging of Bee By-Products	5	50	Mandatory
8	AGR/BKP/008/L3	Cross Pollination Services	5	50	Mandatory
9	AGR/BKP/009/L3	Record keeping	5	50	Mandatory
Grand Total			38	380	

Unit 1: Work Safely in Beekeeping Environment

Unit Reference Number: AGR/BKP/001/L3

NSQ Level: 3

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: This unit is designed to provide the learner with knowledge of health and safety precaution and avoidance of environmental hazards associated with bee keeping practice.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)

UNIT 01: Work Safely in Beekeeping environment

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
LO 1: Work safely in Beekeeping Environment.	1.1	Explain safe work practices along the Beekeeping production value chain									
	1.2	Identify safety signs and symbols in Beekeeping processing facilities									
	1.3	Provide safety signs and symbols correctly									
	1.4	Demonstrate safe work practices and instructions in Beekeeping processing facilities									
	1.5	Operate in accordance with health and safety practices									
LO 2: Comply with safety standards in Beekeeping processing facilities	2.1	Identify work environment hazards									
	2.2	State types of hazards and risks in Beekeeping processing facilities									
	2.3	State safety standards in Beekeeping processing facilities									
	2.4	Use safety tools, materials and equipment in Beekeeping processing facilities									
LO 3: Use personal protective equipment (PPE) in Beekeeping processing facilities	3.1	Identify the types of PPEs									
	3.2	Select appropriate PPE									
	3.3	Demonstrate the use of PPE									
	3.4	Maintain PPE before and after use									
LO 4: Respond to accidents/injury in Beekeeping processing	4.1	Locate first aid facility.									
	4.2	Use basic dressing materials.									
	4.3	Report accident/injury to the appropriate supervisor									
LO 5: Apply safe work habit and clean work environment in	5.1	Use safe access in the work environment									
	5.2	Use exit routes in the work environment									

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
Beekeeping processing	5.3	Identify appropriate working tools, materials and equipment									
	5.4	Use tools and equipment safely in accordance with the supervisor's instructions									
	5.5	Return all tools, equipment materials for appropriate storage.									
	5.6	Carry out general housekeeping of work environment									
	5.7	Dispose all wastes appropriately to designated waste facilities									
LO 6: Comply with standards of lifting, loading/off-loading and stacking of materials in Beekeeping processing facilities	6.1	Load and offload materials without using mechanical assisted lifting techniques.									
	6.2	Load and offload material using mechanical assisted lifting techniques.									
	6.3	Stack materials correctly									
Learners Signature:			Date:								
Assessors Signature:			Date:								
IQA Signature (if sampled)			Date:								
EQA Signature (if sampled)			Date:								

Unit 2: Communicate Effectively in Beekeeping Environment

Unit Reference Number: AGR/BKP/002/L3

NSQF Level: 3

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of communication techniques in Beekeeping farming.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)

UNIT 02: Communicate Effectively in Beekeeping Environment

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.				
LO 1: Apply the use of a non-complex communication system in a work environment	1.1	Use a verbal means to pass on necessary information										
	1.2	Use non-verbal means to convey necessary information										
	1.3	Interpret symbols and signs appropriately										
LO 2: Know the sources of information in a work environment	2.1	Identify the source of information in the work environment										
	2.2	Use the different information flow systems in a work environment										
	2.3	Use information gathered to avoid challenges in a work situation										
	2.4	Report findings appropriately in accordance with laid down procedures in the work environment i.e. Cards, Flip Chart										
	2.5	Use simple communication gadget										
LO 3: Use various means of communication in a work environment	3.1	Locate the various communication equipment in the work environment										
	3.2	Use effectively the various communication equipment in a work environment										
	3.3	Pass information effectively to the right personnel										
	3.4	Follow instructions in line with ethics of the work environment										
Learners Signature:							Date:					
Assessors Signature:							Date:					
IQA Signature (if sampled)							Date:					
EQA Signature (if sampled)							Date:					

UNIT 3: TEAMWORK IN BEEKEEPING PRACTICES

Unit Reference Number: AGR/BKP/003/L3

NSQF Level: 3

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose:

This unit is designed to provide the learner with knowledge of necessary knowledge and skills to develop team spirit and positive working relationship with colleagues.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)

Unit 3: Teamwork in Beekeeping Practices

LO (Learning outcome)		Criteria:-	Evidence Type				Evidence Ref		Page number
LO 1 Understand positive working relationship with colleagues	1.1	Explain the need for developing positive working relationship with colleagues							
	1.2	Explain the importance of relating with other people in a way that makes them feel valued and respected							
	1.3	Assist team members in lifting, carrying and stacking bee equipment.							
	1.4	Explain the report procedure to the appropriate personnel when request for assistance fall outside area of responsibility.							
	1.5	Communicate information to colleagues about individual work that may affect team work.							
LO 2: Know the responsibilities within the team									
	2.1	Describe your own roles and responsibilities within a team							
	2.2	Evaluate individual tasks in line with the team's rules and regulations.							
	2.3	Explain the effectiveness of Participation in teamwork.							
LO 3: Comply with the organisational policy									
	3.1	Explain organizational code of conduct							
	3.2	Explain the organizational standard in bee keeping							
	3.3	Adhere strictly to instructions given by the Management							

Learners Signature:**Date:**

Assessors Signature:

Date:

IQA Signature (if sampled)

Date:

EQA Signature (if sampled)

Date:

Unit 04: Honey harvesting and processing**Reference Number:** AGF/BKP/004/L3**NSQ Level:** 3**Credit Value:** 5**Guided Learning Hours:** 50

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of honey harvesting and processing.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)

UNIT 04: Honey harvesting and processing

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
LO 1: Select the method for honey harvesting	1.1	List the methods of honey harvesting									
	1.2	Explain the methods of honey harvesting									
	1.3	Select the suitable method of honey harvesting in accordance with the type of hives in the apiary									
LO 2: Apply safety precautions for honey harvesting	2.1	List safety rules and precautions to be observed during honey harvesting.									
	2.2	List safety rules and precautions to be observed during honey extraction.									
	2.3	Observe safety rules and precautions for honey harvesting.									
	2.4	Observe safety rules and precautions for honey extraction.									
LO 3: Select the fully capped combs for harvesting	3.1	Identify the percentage of the capped cells on the honey combs									
	3.2	Select the fully capped combs for honey harvesting.									
	3.3	Remove the selected combs to a covered container									
LO 4: Extract honey from the combs	4.1	Identify equipment and materials used in honey extraction									
	4.2	De-cap the honey combs with appropriate equipment									
	4.3	Extract the honey from the selected combs using the appropriate equipment and materials for honey harvesting in accordance with the selected extraction method									
LO 5:	5.1	List the types of filters used after the honey extraction									
	5.2	Explain the types of filters used for honey extraction.									

Carry out filtering of the extracted honey	5.3	Demonstrate methods of using each filter.										
	5.4	Use the filters for honey extraction										
LO 6: Understand the importance of Honey Testing	6.1	Explain standards of honey testing										
	6.2	Identify the normal parameters of honey testing										
	6.3	Explain the importance of Honey testing in the practice of beekeeping										
Learners Signature:			Date:									
Assessors Signature:			Date:									
IQA Signature (if sampled)			Date:									
EQA Signature (if sampled)			Date:									

Unit 5: Production and Storage of other bee-products**Unit Reference Number:** AGF/BKP/005/L3**NSQ Level:** 3**Credit Value:** 5**Guided Learning Hours:** 50

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of harvesting and storage of other bee-products (pollen , propolis, Royal Jelly, bee brood and bee venom) .

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)

UNIT 5: Production and Storage of other bee-products

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.				
LO 1: Identify other bee-products	1.1	List other bee-products (wax, pollen, propolis etc)										
	1.2	Identify the products listed in 1.1										
	1.3	State and explain the methods of harvesting other bee-products.										
	1.4	Explain the importance of other bee-products										
	1.5	Explain the procedure of harvesting other bee-products										
LO 2: Use appropriate tools and equipment for harvesting other bee product.	2.1	List the appropriate tools for harvesting other bee-product.										
	2.2	Identify the appropriate tools for harvesting other bee-product.										
	2.4	Use the appropriate tools to harvest other bee-product.										
LO 3: Identify appropriate storage of bee by-products/ materials	3.1	List appropriate storage materials for storing bee by-product.										
	3.2	Identify appropriate storage materials for storing bee by-product.										
	3.3	Describe the use of storage materials.										
	3.4	Demonstrate the use of storage materials.										
	3.5	Store bee by-product appropriately										
Learners Signature:			Date:									
Assessors Signature:			Date:									
IQA Signature (if sampled)			Date:									
EQA Signature (if sampled)			Date:									

Unit 6: Harvesting of other Bee by-products.**Unit Reference Number:** AGR/BKP/006/L3**NSQ Level:** 3**Credit Value:** 5**Guided Learning Hours:** 50

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of rendering wax, harvesting pollen, and propolis of high quality.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. *Simulation is/or is not allowed* in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Work Product (WP)
6. Recognition of Prior Learning (RPL)

UNIT 6: Harvesting of other Bee by-products.

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. No.	Page
LO 1: Carry out Bees Wax and Wax rendering	1.1	Harvest white coloured combs			
	1.2	Identify the raw materials for wax rendering.			
	1.3	Explain the methods of wax rendering.			
	1.4	Identify the necessary equipment for wax rendering			
	1.5	Explain the temperature fax in wax rendering.			
	1.6	Render wax			
	1.7	Identify good quality wax.			
LO 2: Carry out Pollen harvesting and processing	2.1	Explain the various methods of pollen harvesting.			
	2.2	Explain the importance factors to be observed for pollen harvesting.			
	2.3	Identify pollen traps and relevant tools/equipment for pollen harvesting.			
	2.4	Set the pollen traps for pollen harvesting.			
	2.5	Process and store pollen appropriately.			
LO 3: Carry out Propolis harvesting and processing	3.1	Explain methods of propolis harvesting			
	3.2	Use tools and materials for propolis harvesting.			
	3.3	Explain the steps for propolis processing.			
	3.4	Process and store propolis.			
LO 4: Carry out Royal Jelly Production and Preservation	4.1	Outline the necessary queen rearing and royal jelly tools and equipment			
	4.2	Describe the queen rearing and royal jelly tools/equipment and their uses.			
	4.3	Identify the queen rearing and royal jelly tools and equipment			
	4.4	Use queen rearing and royal jelly tools and equipment.			

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
LO 5: Carry out Bee Venom Production and Preservation	5.1	Outline the necessary Been Venom harvesting tools and equipment.		
	5.2	Describe the bee venom harvesting tools/equipment and their uses.		
	5.3	Identify the bee venom harvesting tools and equipment		
	5.4	Use bee venom harvesting tools and equipment		
Learners Signature:			Date:	
Assessors Signature:			Date:	
IQA Signature (if sampled)			Date:	
EQA Signature (if sampled)			Date:	

Unit 07: Packaging of Bee By-Products

Unit Reference Number: AGF/BKP/007/L3

NSQ Level: 3

Credit Value: 5

Guided Learning Hours: 50

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of Packaging of Bee By-Products.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Work Product (WP)

UNIT 07: Packaging of Bee By-Products

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.			
LO 1: Carry out packaging of Bee By-Products	1.1	Describe appropriate environment for packaging bee by-products								
	1.2	List the steps for packaging each product								
	1.3	Identify packaging materials for bee by-products.								
	1.4	Package the bee by-product								
LO 2: Select Types of Packaging materials	2.1	Describe the different types of packaging materials								
	2.2	Differentiate packaging materials								
	2.3	Identify suitable packaging material for each bee by-product								
LO 3: Design appropriate label for each bee product	3.1	Explain the importance of labelling for each bee product								
	3.2	Describe Suitable label for two bee by-products								
	3.3	Label any bee by-product								
LO 4: Market Processed/packaged bee by-products	4.1	List the target markets for marketing the bee products.								
	4.2	Select the preferred marketing strategy for marketing each bee product.								
	4.3	Market the bee products to the target markets using the selected marketing strategies.								
Learners Signature:			Date:							
Assessors Signature:			Date:							
IQA Signature (if sampled)			Date:							
EQA Signature (if sampled)			Date:							

Unit 08: Cross Pollination Services

Unit Reference Number: AGF/BKP/008/L3

NVQ Level: 3

Credit Value: 5

Guided Learning Hours: 50

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of cross pollination of a crop farm.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Work Product (WP)

UNIT 8: Cross Pollination Services

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.				
LO 1: Know services related Cross Pollination	1.1	Explain Cross pollination										
	1.2	Explain the importance of Cross pollination										
	1.3	Explain the role of bees in bio-diversity										
	1.4	Explain the types of cross pollination										
	1.5	Outline the economic benefits of cross pollination in agriculture.										
	1.6	List the Factors and functional indicators of cross pollination.										
	1.7	Explain Costs of cross pollination services										
LO 2: Estimate the financial benefits of cross pollination in a specific farm.	2.1	Estimate the income of the farm from natural pollination.										
	2.2	Estimate the income of the farm after introduction of colonies for cross pollination.										
	2.3	Compare the income of the farm before and after cross-pollination										
LO 3: Estimate the number of colonies, period, and time required to cross pollinate the bee farm	3.1	Take the measurement of land in the particular farm.										
	3.2	Identify the farm crops										
	3.3	Calculate the number of colonies to be employed in the particular farm										
LO 4: Estimate the cost of cross pollination of a specific farm	4.1	Estimate the cost of bee cross pollination.										
	4.2	Calculate the required expenditures for pollination services										
	4.3	Estimate bee-pollination services and project the financial cost of										

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
		cross pollination of the farm land used.									

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

Unit 09: Record Keeping

Unit Reference Number: AGF/BKP/09/L3

NSQ Level: 3

Credit Value: 1

Guided Learning Hours: 10

Unit Purpose: This unit is designed to provide the learner with knowledge and skills of Record keeping.

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Personal statement (PS) or Reflective Practice (RP)
5. Recognition of Prior Learning (RPL)
6. Work Product (WP)

UNIT 09: RECORD KEEPING

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. No.	Page	
LO 1: Understand Record Keeping in Beekeeping	1.1	Explain the importance of accurate and up-to-date record keeping in beekeeping.							
	1.2	Describe the different types of records that should be kept in beekeeping, including: <ul style="list-style-type: none"> ➤ Colony records. ➤ Honey production records. ➤ Financial records. 							
	1.3	Identify common challenges or obstacles to maintaining accurate and up-to-date records in beekeeping.							
	1.4	Explain the benefits of using records to inform decision-making in beekeeping, including: <ul style="list-style-type: none"> ➤ Improved colony management. ➤ Increased honey production. ➤ better financial management. 							
LO 2 Maintain Bee Colony Records:	2.1	Accurately record bee colony information, including: <ul style="list-style-type: none"> ➤ Colony strength and population. ➤ Queen bee presence and performance 							
	2.2	Update records regularly, including: <ul style="list-style-type: none"> ➤ Weekly or bi-weekly inspections during peak season. ➤ Monthly inspections during off-peak season 							
	2.3	2.3. Use records to inform decision-making, including: <ul style="list-style-type: none"> ➤ Identifying colonies that require additional support or management. 							

		<ul style="list-style-type: none"> ➤ Determining the need for pest or disease control measures. ➤ Planning for honey harvesting and extraction. 											
LO 3:													
Maintain Honey Production and Harvesting Records:	3.1	Accurately record honey production and harvesting information, including: <ul style="list-style-type: none"> ➤ Amount of honey harvested. ➤ Date and time of harvest. ➤ Quality and purity of honey 											
	3.2	Update records regularly, including: <ul style="list-style-type: none"> ➤ After each harvest. ➤ At the end of each production season 											
	3.3	Use records to inform decision-making, including: <ul style="list-style-type: none"> ➤ Identifying trends in honey production and quality. ➤ Determining the need for adjustments to harvesting or extraction techniques. ➤ Planning for future honey production and harvesting. 											
LO 4													
Maintain Financial and Business Records:	4.1	Accurately record financial information, including: <ul style="list-style-type: none"> ➤ Income from honey sales ➤ Expenses for equipment, supplies, and labor. ➤ Profit and loss statements. 											
	4.2	Update records regularly, including:											

		<ul style="list-style-type: none"> ➤ Monthly or quarterly financial statements ➤ Annual business planning and budgeting 										
	4.4	Use records to inform decision-making, including: <ul style="list-style-type: none"> ➤ Identifying areas for cost savings or efficiency improvements. ➤ Determining the need for investments in new equipment or technology. Planning for future business growth and development. 										
Learners Signature:			Date:									
Assessors Signature:			Date:									
IQA Signature (if sampled)			Date:									
EQA Signature (if sampled)			Date:									

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National Skills Qualifications FOR BEEKEEPING PRACTICE

LEVEL 1, 2 & 3



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