CONSTRUCT BEE HIVES AND BEE EQUIPMENT

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UNIT DESCRIPTION

This unit specifies the competencies required to construct bee hives. It involves preparing to construct bee hives, constructing Kenya Top Bar Hive, Langstroth Hive, catcher box, observation hive and post construction of hives and catcher box and observation hives

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the **key outcomes** which make up **workplace function**.	**PERFORMANCE CRITERIA** These are **assessable** statements which specify the required level of performance for each of the elements. ***Bold and italicized terms are elaborated in the Range***
1. Prepare to construct bee hives	1.1 Type of hives identified (Traditional -log, bark, bricks, mud, and reeds. Improved hives- Kenya Top Bar Hive, Langstroth hive) 1.2 ***Materials and equipment for construction*** of hives are identified as per the type of hive 1.3 Personal protective equipment is worn as per the occupational health and safety procedures
2. Construct Kenya Top Bar Hive	2.1 ***Materials and equipment*** for construction are assembled as per the requirements 2.2 The timber is seasoned as per work place procedures 2.3 The timber is planed to the recommended thickness 2.4 ***Components*** of the hive and their measurements are identified 2.5 The timber is cut/ split to size as per the component standard specification 2.6 Different hive components are constructed as per standard specification 2.7 The lid material is cut as per standard specification 2.8 Queen excluder is constructed as per the standardspecification

	2.9 Bee entrances holes are drilled on one end as per the workplace procedures 2.10 Various components are assembled according to the work place procedures 2.11 Hive hanging wires are fixed as per work place procedure
3. Construct Langstroth Hive	3.1 Materials and equipment for construction are identified and assembled as per the requirements 3.2 The timber is seasoned as per work place procedures 3.3 The timber is planed to the recommended thickness 3.4 Components of the hive and their measurements are identified 3.5 The timber is cut/ split to size as per the component specification 3.6 Different hive components are constructed as per standard specification 3.7 The lid material is cut as per standard specification 3.8 Queen excluder is constructed as per the standard specification 3.9 Various components are assembled according to the work place procedure
4. Construct catcher box	4.1 Type of catcher box identified and assembled as per the hive to be stocked 4.2 Materials and equipment for construction are assembled as per the requirements 4.3 The timber is season as per work place procedures 4.4 The timber is planed to the recommended thickness 4.5 Components of the catcher box and their measurements are identified 4.6 The timber is cut/ split to size as per the component standard specification 4.7 The lid material is cut as per standard specification 4.8 Bee entrances/holes are drilled on one end as per work place procedure

	4.9 Various components are assembled according to the work place procedures 4.10 Hanging wires are fixed as per work place procedure
5. Construct observation hive	5.1 Observation hive is identified as per the workplace procedures 5.2 Materials and equipment for construction are identified and assembled as per the requirements 5.3 The timber is season as per work place procedures 5.4 The timber is planed to the recommended thickness 5.5 Components of the observation hive and their measurements are identified 5.6 The timber and glass are cut/ split to size as per the component standard specification 5.7 The lid material is cut as per standard specification 5.8 Bee entrances/holes are drilled on one end 5.9 Various components are assembled according to the work place procedures
6. Post construction of hives and catcher box and observation hives	3.1 Hives and catcher boxes are baited as per work place procedures 3.2 Hives, catcher box and observation hives are stored as per the workplace procedures 3.3 ***Waste is managed and disposed*** appropriately as per NEMA and workplace procedures
7. Perform digital record keeping	4.1 **Word processing concepts** are applied in solving workplace tasks as per job requirements. 4.2 Netiquette principles are observed as per work requirements. 4.3 Internet search is performed using clear parameters as per job requirements. 4.4 Electronic mail communication is executed in accordance with workplace policy.

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variables	Range
1. Materials and equipment for construction may include but not limited to:	• Timber • Flat metal bar • File for sharpening • Nails, hammers • Wood plainer • Joinery equipment • Tape measure • Iron sheets • Galvanized aluminum sheets and wire • Drilling machine • Pliers • Cotton material • Goose net • Coffee wire • Leather/Rexene gloves • Sewing machine • Tailoring scissors • Tin sip • Zips and elastic material

2. Bee equipment may include but not limited to:	• Smokers • Hive tools • Honey extractors • Bee brush • Honey strainers • Sisal yarn • Solar wax extractors • Observation hive • Honey press • Steam wax extractor • PPE • Pollen trap • Catcher box • Propolis collector
3. Waste is managed and disposed may include but not limited to:	• Burning • Burying • Recycling • Selling
4. Word processing concepts may include but not limited to:	• Creating word documents • Editing word documents • Formatting word documents • Save word documents • Printing word documents

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required Skills

The individual needs to demonstrate the following skills:

- Organizing skills
- Analytical skills
- Negotiation skills

- Interpersonal skills
- Communication skills
- Evaluation skills
- Problem solving
- Critical thinking
- Bee hive construction skills

Required Knowledge

The individual needs to demonstrate knowledge of:

- Types of hives and bee equipment
- Types of hives
- Hive standard specifications
- Evaluation of hive and bee equipment
- Waste Disposal procedures.
- Workshop technology
- Machine operation
- Maintenance of equipment

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Assembled materials and equipment for construction of hives as per the type of hive and bee equipment. 1.2 Donned personal protective equipment as per the occupational health and safety procedures 1.3 Constructed and evaluated quality of hives and bee equipment as per standard specifications 1.4 Stored hives and equipment as per the workplace procedures 1.5 Managed and disposed waste appropriately as per

	NEMA and workplace procedures
2. Resource Implications for competence certification	The following resources should be provided: 2.1 Access to relevant workplace 2.2 Appropriately simulated environment where assessment can take place 2.3 Materials relevant to the proposed activity or tasks
3. Methods of Assessment	Competency may be assessed through: 3.1 Written tests 3.2 Third party reports 3.3 Oral questioning 3.4 Interview 3.5 Observation
4. Context of Assessment	Assessment could be conducted: • On-the-job • During industrial attachment
5. Guidance information for assessment	Holistic assessment with related units in the sector