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		Issue No.	01
		Effective Date	04/02/2020

SECTION A: QUALIFICATION DETAILS														
QUALIFICATION DEVELOPER (S)					Construction Industry Trust Fund									
TITLE			Certificate III in Horticulture							NCQF LEVEL			3	
FIELD		Agriculture and Nature Conservation				SUB-FIELD		Horticulture		CREDIT VALUE			44	
New Qualification					Review of Existing Qualification									
SUB-FRAMEWORK			General Education				TVET		<input checked="" type="checkbox"/>		Higher Education			
QUALIFICATION TYPE		Certificate		I	II	III	<input checked="" type="checkbox"/>	IV	V	Diploma	Bachelor			
		Bachelor Honours			Post Graduate Certificate					Post Graduate Diploma				
		Masters							Doctorate/ PhD					
RATIONALE AND PURPOSE OF THE QUALIFICATION														
<p>RATIONALE:</p> <p>Government has identified high unemployment and poverty amongst youth as a national security risk, hence the need to train this section of the population in productive and income generating skills.</p> <p>Despite the country continuing to receive investments, these investments are biased towards capital intensive ventures. This situation has the inherent risk of unemployment continuing to surge, and the government, through its vital development policy paper, National Development Plan 11 (NDP 11), has identified areas of potential high employment uptake such as agriculture, services, and manufacturing and has made a commitment to give these sectors extensive support with a view to making meaningful contribution the growth of the economy.</p> <p>Another policy document that makes mention of skills development as a vehicle towards inclusivity and provision of opportunities for all, is the Vision 2036 document under the of Human and Social Development (Pillar 2) which states that” Botswana society will be knowledgeable with relevant quality education that is outcome based, with emphasis on technical and vocational skills as well as academic competencies.”</p>														

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Horticulture is one such sector with a high potential for employment uptake. As an emerging sector there is need for standardization that would give professionalization of this sector. The Human Resources Development Council (HRDC) report of 2016, *Top Occupations in Demand*, listed Horticulture Production Specialist as those occupations that would be in demand in the future.

This qualification provides qualifying learners with the underlying horticulture knowledge, skills and values in order to become competent practitioners in the agricultural sector; be employed or self-employed within the industry and pursue further learning in specific areas of Horticulture.

PURPOSE:

The qualification enables the qualifying learner to:

- Apply the principles of health and safety in the horticultural environment.
- Differentiate between the various plants and their structure.
- Categorize plants by their groups.
- Perform techniques of the soil for planting.
- Demonstrate the skill of growing, handling and caring of plants.
- Apply Irrigation techniques.
- Identify pests and their control.
- Perform post-harvest activities.

ENTRY REQUIREMENTS (including access and inclusion)


Minimum entry requirements for this qualification are as outlined below:

- NCQF Level II, Certificate II or equivalent.
- There shall be access through RPL and CAT in line with the National RPL and CAT Policies.

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SECTION B QUALIFICATION SPECIFICATION	
Upon completion of this qualification, candidates will:	
GRADUATE PROFILE (LEARNING OUTCOMES)	ASSESSMENT CRITERIA
1. Apply the principles of Occupational Health and Safety in the Work Environment	1.1 Identify hazards in the Workplace. 1.2 Assess possible risks in the workplace. 1.3 Practice Good Housekeeping. 1.4 Wear Appropriate Personal Protective Equipment
2. Demonstrate basic knowledge of Entrepreneurial principles in the workplace	2.1 Plan for given work assignments. 2.2 Solve problems creatively in the workplace. 2.3 Mobilise people and resources to execute tasks. 2.4 Create value through implementation of innovative ideas
3. Demonstrate knowledge of plants, their structure and functions of their various components	3.1 Explain the role of the leaf in the structure and growth of a plant. 3.2 Describe the functions of the roots and stems, in the structure and development of a plant. 3.3 Explain the role the flower has in the reproductive process of a plant. 3.4 Discuss the necessity of water for the growth and development of plants. 3.5 Describe the factors that affect the water requirements of plants. 3.6 Explain the importance of watering seedlings and newly transplanted material.
4. Apply knowledge to select suitable site and prepare land for horticulture projects	4.1 Differentiate various types of soil suitable for horticulture projects 4.2 Explain the importance of cultivation, tilling and enriching the soil before planting.

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	4.3	Perform procedure for the collection of soil samples according to standards.
	4.4	Describe different methods of soil testing, fertility testing and water quality.
	4.5	Describe the criteria for the selection of suitable farm area described in relation to topography, infrastructure, water availability and quality.
	4.6	De-bush land for horticulture and explain methods of clearing.
	4.7	Use and maintain different equipment and machinery to prepare horticultural area according to manufacture specifications.
	4.8	Perform fence erection and maintenance using different methods according to standards
	5. Perform propagation of ornamental plants and seedlings.	5.1 Demonstrate knowledge of the preparation of the seed bed and the manual sowing of seed are.
		5.2 Describe the maintenance and 'growing on' of seedlings.
		5.3 Demonstrate how to do the 'pricking out' of seedlings and the cultural care, prior to the transplanting stage is described.
		5.4 Monitor and control the germination environment.
		5.5 Plant and establish ornamental plants from containers into open ground.
		5.6 Apply asexual and sexual propagation techniques on various plants
		5.8 Use various propagation media.
	6. Demonstrate application of crop management in horticulture	6.1 Perform various protected cultivation types and methods.
		6.2 Mix growing media according to industry standards.
		6.3 Plant and harvest various plants according to cropping plan.
		6.4 Apply different watering methods to plants to their specified requirement to their specified requirement.
		6.5 Prune and support plants with stakes or by trellising.

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	6.6 Separate seedlings by thinning. 6.7 Perform the weeding of cultivated areas. 6.8 Apply mulch to cultivated areas. 6.9 Control Pests. 6.10 Apply fertilizer using different methods and at required times. 6.11 Use, maintain and calibrate farm equipment according to manufactures specification.
7. Demonstrate Competence of harvesting plants	7.1 Identify maturity indices for different crops. 7.2 Apply different harvesting methods and use appropriate tools according to standards. 7.3 Clean, sort and handle harvested produce according to industry standards. 7.4 Grade, pack and label harvested produce according to the required Standards. 7.5 Store harvested produce safely in designated areas.

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SECTION C					
QUALIFICATION STRUCTURE					
COMPONENT	TITLE	Credits Per Relevant NCQF Level			Total (Per Subject/ Course/ Module/ Units)
		Level [3]	Level [4]	Level []	
	Fundamental entrepreneurial principles	3			2
	Communication Skills	3			2
	Safety, health and environmental protection	3			2
CORE COMPONENT <i>Subjects/Courses/ Modules/Units</i>	Site in preparation for horticultural work	3			2
	Soil Preparation	3			3
	Nurseries, gardens and orchards	3			3
	Moisture conservation	3			2
	Garden Tools and Equipment	3			3
	Plant Propagation		4		4
	Cropping plan for horticulture	3			3
	Soil fertility and plant nutrition	3			3
	Pests, weeds, diseases and disorders of plants	3			3
	Agrichemical Equipment		4		3
	Harvesting of Horticultural Products	3			3
	Produce Storage	3			3

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	Post-harvest activities in Horticulture	3			3
ELECTIVE/ OPTIONAL COMPONENT Subjects/Courses/ Modules/Units	N/A				



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SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL	
TOTAL CREDITS PER NCQF LEVEL	
NCQF Level	Credit Value
3	37
4	7
TOTAL CREDITS	44
Rules of Combination: (Please Indicate combinations for the different constituent components of the qualification)	
<p>The qualification consists of Fundamental and Core Components.</p> <p>To be awarded the Qualification learners are required to obtain a minimum of 44 credits as detailed below.</p> <p>Fundamental Components:</p> <p>The Fundamental components consist of foundational knowledge, which is generic, all of which are compulsory.</p> <p>Core Components:</p> <p>The core components consist of modules containing applied knowledge and practical skills to the value of 38 credits which are compulsory.</p>	

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ASSESSMENT ARRANGEMENTS

All assessments leading/contributing to the award of credits, or a qualification shall be based on learning outcomes and/or sub-outcomes.

1.1 Formative assessment:

Formative or continuous assessment would be conducted to inform teaching and learning and establish the learner's level of readiness for progression to the next learning unit or module.

Formative assessment shall constitute 60% of the Final Mark.

1.2 Summative assessment:

Internal summative assessments shall be carried out in accordance all applicable examination rules, and the weighting of the assessment shall constitute 40% of the Final Mark.

All assessment shall be carried out by BQA registered and accredited Assessors.

MODERATION ARRANGEMENTS

There shall be internal and external moderation carried out by BQA registered and accredited Moderators.

RECOGNITION OF PRIOR LEARNING

Candidates may submit evidence of prior learning and current competence and/or undergo appropriate forms of RPL assessment for the award of credits towards the qualification in accordance with applicable RPL policies and relevant national-level policy and legislative framework.

CREDIT ACCUMULATION AND TRANSFER

Candidates would be allowed to accumulate enough credits that would warrant them the award of the qualification. This would include transfers of credits from previous learnings.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Horizontal Articulation:

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Graduates of this qualification may consider pursuing to other qualifications on the same levels in the field of horticulture such as:

- Certificate III in landscaping
- Certificate III in floriculture
- Certificate III in rain-fed crop farming

Vertical Articulation:

Learners may progress to higher level in the same field such as:

- Certificate IV Horticulture

Employment Pathways

Learners who attain this qualification will have competencies and attributes to work as:

- Field Assistant
- Gardener
- Technical Assistant (level 4)

QUALIFICATION AWARD AND CERTIFICATION

To be awarded the qualification the candidate must have met the following requirements:

- All exit level outcomes
- Minimum **44** credit requirements

Certification:

Upon completion of the qualification the candidate will be awarded a **Certificate III in Horticulture**.

REGIONAL AND INTERNATIONAL COMPARABILITY

Benchmarking has been done against qualifications registered in neighbouring countries within the region and beyond, to appreciate what is typical of this level and type of qualification out there, in relation to graduate profiling, scope and depth of content, to ascertain regional and international comparability and articulation of the proposed qualification. The outcomes of this process are highlighted below.

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The following Similarities and Differences of the qualifications examined were observed.

Similarities

All the 4 qualification bear similarities in terms of exit level outcomes and scope. The scope covers core Horticulture outcomes and domains that include preparation of soils, propagation of plants, pest control, post-harvest activities, operation of agricultural machinery and equipment, and irrigation systems.

Another similarity is the inclusion of fundamental modules that include occupational safety, human resources management, and entrepreneurship

Differences

Slight variations have been observed in the qualifications studied, especially with regards to the core modules. The Namibia Institute of Technology (NIT) has included another module Horticulture, being the livestock industry of Namibia. The Swinburne University of Technology in Australia has included a variety of modules that include Parks and Gardens, Landscape, and Nurseries.

Another difference observed is the disparity in the credit loading of the qualifications. The South African qualification has 120 credits at NQF Level 3, while credits for the New Zealand qualification is only 60 credits, and the Namibian one pegged at 100 credits. Although the credit loading of the Australian qualification was not established, as they talk of units, it has a duration of one year.

Comparability and Articulation

The proposed qualification generally compares well with the qualification studied since the exit outcomes cover similar scope and depth and are aligned to exit-level descriptors typical of this level and as done within the region and beyond as well as competencies required for employment as a tiler.

The qualification has also included in the fundamental modules, entrepreneurship, in addition to safety and communication. This is meant to give learners more latitude to venture into self-employment, and not to singularly rely on being employed.

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REVIEW PERIOD

The qualifications shall be reviewed after 5 years.

