

BQA NCQF QUALIFICATION TEMPLATE

SECTION A: QUALIFICATION DETAILS															
QUALIFICATION DEVELOPER (S)			Pudulogong Rehabilitation and Development Trust for the Blind												
TITLE		Certificate V in Horticulture								NCQF LEVEL		5			
STRANDS (where applicable)		N/A													
FIELD		Agriculture and Natural Conservation								CREDIT VALUE		130			
SUB FIELD		Crop Production													
New Qualification		√		Legacy Qualification				N/A		Renewal Qualification				N/A	
										Registration Code				N/A	
SUB-FRAMEWORK		General Education				TVET				√		Higher Education			
QUALIFICATION TYPE		Certificate		I	II	III	IV	V	√		Diploma		Bachelor		
		Bachelor Honours				Post Graduate Certificate						Post Graduate Diploma			
		Masters								Doctorate/ PhD					
RATIONALE AND PURPOSE OF THE QUALIFICATION															

RATIONALE:

Agriculture has played a pivotal role in the process of economic development in many countries around the world. Developed countries started their prosperity from the agricultural sector by producing enough food for their local market and then exporting to external markets.

The VEGETABLE ENTERPRISE GUIDELINE from the Botswana Government states that “Vegetables production plays an important role in human diet. In Botswana the inclusion of Vegetables in agriculture is an important undertaking because unlike other agriculture commodities, it has been realized that it can be practiced profitably at both large and small scale. Over and above its potential for being a profitable commodity, horticulture production plays an important role in socio-economic development as it alleviates the current unemployment status by creating jobs to the surrounding communities.” The HRDC Priority Occupations List identifies as a priority specialists for Horticulture with the following technical skills: Botany, Micro Biology, Environmental science, hydroponics and record management. Vision 2036 states that “Agriculture also has the potential to contribute to Government revenue generation and export earnings”.

To catalyse the current growth model to achieve a high income status, concerted efforts must be exerted in the development of Horticulture. It is therefore an imperative that we educate youth about the importance of Horticulture. They have to be provided with the necessary technical skills to enable them to participate gainfully within this market to exploit the opportunities being presented by the Horticulture value chain. Vision 2036 page 15 states that “We will encourage the development of private sector led value chains in the agricultural sector including the production, processing, marketing and distribution activities”.

The development of this Horticulture qualification was considered after realising the need to provide technical skills to the students to enable them to participate in the Horticulture value chain as per Vision 2036. The market for Horticulture products is wide open since the closure of the borders for some vegetables from outside the country. This is reason enough to focus on this sub-sector in order to gravitate towards self-sufficiency in the production/supply of vegetables and fruits and aim for exportation where necessary.

PURPOSE: (itemise exit level outcomes)

The purpose of this qualification is to produce graduates with broad technical knowledge, skills and competencies to:

BQA NCQF QUALIFICATION TEMPLATE

- a. identify and grow a wide range of different plants to contribute to national food security.
- b. apply concepts of horticulture to select, manage and improve plants and their products.
- c. apply knowledge and skills in plant propagation for national self-sufficiency in horticultural produce.
- d. demonstrate proficiency with field-based technologies used in modern horticulture.
- e. anticipate and recognise problems, identify causes of these problems, quantify potential impacts, analyse options, identify viable solutions, and evaluate actions and consequences of treatments and interventions.
- f. apply theoretical and practical knowledge to support the horticulture supply chain for national self-sufficiency.

MINIMUM ENTRY REQUIREMENTS (including access and inclusion)

To be admitted into the programme, the candidate must have satisfied the minimum requirements for the entry outlined below:

- i. NCQF Level 4, Certificate in horticulture or related discipline
- ii. RPL and CAT will be applied in accordance with institutional and national policies.

(Note: Please use Arial 11 font for completing the template)

SECTION B QUALIFICATION SPECIFICATION	
GRADUATE PROFILE (LEARNING OUTCOMES)	ASSESSMENT CRITERIA
1. Implement technical skills and knowledge in the fruit and vegetable production	<p>1.1 Classify plants using four major characteristics (species)</p> <p>1.2 Utilise growth and development patterns (life cycle) of plants for production of fruit and vegetable species</p> <p>1.3 Demonstrate knowledge of basic physiological processes (photosynthesis, Respiration and Transpiration) of a plant in the propagation of plants and vegetables.</p> <p>1.4 Demonstrate horticulture knowledge on plant care and management.</p> <p>1.5 Explain production conditions and practices for fruit and vegetable crops and compare the various culture systems</p>
2. Identify and improve the soil condition for plant propagation.	<p>2.1 Apply skills and knowledge on soil condition to maintain and improve the soil for plant propagation.</p> <p>2.2 Diagnose the major nutrient deficiencies that occur in plants and prescribe treatment practices</p> <p>2.3 Evaluate fertiliser suitability for use in horticulture to maximize plant nutrition and growth.</p> <p>2.4 Utilise management plans for soil fertility in fruit and vegetable production.</p>
3. Demonstrate broad knowledge and technical skills of plant propagation from seeds, cuttings	<p>3.1 Implement the processes of growing a vegetable and a tree from the relevant plant propagation methods.</p>

BQA NCQF QUALIFICATION TEMPLATE

and seedlings (vegetables and fruit, forest and ornamental tree)	<p>3.2 Demonstrate skills to protect tree/vegetable seedlings from harm.</p> <p>3.3 Utilise management plans for irrigation in fruit and vegetable production.</p>
4. Identify and control various pests, diseases and weeds in horticulture.	<p>4.1 control infestation of pests, diseases and weeds in vegetables and trees</p> <p>4.2 demonstrate broad knowledge of chemicals and their application in prevention of pests and diseases.</p> <p>4.3 apply safety procedures when using agricultural chemicals.</p> <p>4.4 Utilise management plans for pests, diseases and weeds control in fruit and vegetable production.</p>
5. Demonstrate knowledge and skills of marketing channels which provide profitable returns for a trees and vegetables enterprise.	<p>5.1 Evaluate different marketing strategies for fruit and vegetable crops.</p> <p>5.2 Market trees and vegetables as well as associated products.</p> <p>5.3 Keep proper production and financial records for a tree and vegetable enterprise</p>
6. Demonstrate competence in field based technologies used in modern horticulture including handling and managing simple and familiar farming materials, tools and equipment for vegetable and fruit tree production.	<p>6.1 Demonstrate basic technology skills for use in horticulture</p> <p>6.2 Use technology and related workplace equipment in propagation and care of plants.</p> <p>6.3 Apply Occupational Health and safety (OHS) knowledge when using technology in vegetable and fruit production.</p> <p>6.4 Apply proper ways of handling farm tools and equipment.</p> <p>6.5 Demonstrate comprehensive knowledge of horticultural tools and implement performance as well as horticultural crop processing and preservation.</p>

Note: Please use Arial 11 font for completing the template)



BOTSWANA
Qualifications Authority

BQA NCQF QUALIFICATION TEMPLATE

SECTION C		QUALIFICATION STRUCTURE			
COMPONENT	TITLE	Credits Per Relevant NCQF Level			Total Credits
		Level []	Level [4]	Level [5]	
FUNDAMENTAL COMPONENT Subjects/ Courses/ Modules/Units	<i>Introduction to Information Technology</i>		10		10
CORE COMPONENT Subjects/Courses/ Modules/Units	<i>Fruit and Vegetable Growing</i>			20	20
	<i>Plant propagation and nursery Skills</i>			20	20
	<i>Soils and Composts</i>			20	20
	<i>Pests, Diseases and weeds</i>			10	10

BQA NCQF QUALIFICATION TEMPLATE

	<i>Plant science</i>			10	10
	<i>Plant identification and use</i>			10	10
	<i>Work practice</i>			10	10
STRANDS/ SPECIALIZATION	Subjects/ Courses/ Modules/Units	Credits Per Relevant NCQF Level			Total Credits
		Level []	Level []	Level [5]	
1.					
2.					

BQA NCQF QUALIFICATION TEMPLATE

Electives	<i>Organic Standards and Principles</i>			20	20
	<i>Machinery maintenance</i>			20	20

BOTSWANA
Qualifications Authority

BQA NCQF QUALIFICATION TEMPLATE

SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL

TOTAL CREDITS PER NCQF LEVEL

NCQF Level	Credit Value
4	10
5	120
TOTAL CREDITS	130

Rules of Combination:

(Please Indicate combinations for the different constituent components of the qualification)

Candidates must successfully complete a total of one hundred and thirty (130) credits of competency, consisting of:

- Level 4: Ten (10) Credits of Fundamentals
- Level 5: One hundred (100) credits of Core modules.
- Level 5: Twenty (20) credits of Elective module

(Note: Please use Arial 11 font for completing the template)

ASSESSMENT ARRANGEMENTS

The qualification encourages assessment to be an integral part of teaching, and it will be assessed through both Formative and Summative assessment in an integrated manner as follows:

1. Formative Assessment

- Assignments
- Tests
- Mid-term examinations

2. Summative Assessment

- Final Examination

Weighting and Quality Assurance

- Formative/Continuous Assessment will be done through practical and theoretical assessments and will contribute 60% to the final grade.
- Summative Assessment will be done through examination which will contribute 40% to the final grade.
- Quality Assessors appropriately trained with current knowledge/ experience of the content, drawn from Academic Committee will be engaged to evaluate the quality of the learning experience.

MODERATION ARRANGEMENTS

• Internal moderation requirements

- i. Internal assessment tools should be moderated before administration
- ii. Students portfolios will be moderated internally
- iii. Portfolios will be in place for external moderation

• External moderation requirements

- i. External moderation will be done to ensure setting and marking are at the right standard and level

Moderation will be done by an accredited body or individuals accredited by BQA.

RECOGNITION OF PRIOR LEARNING

The ETP will recognize the knowledge that the learners bring to the qualification and therefore candidates will be allowed to submit evidence of prior learning and current competence they possess. Skills acquired through formal and non-formal learning are recognized. The assessment for prior learning shall be governed by the institution and /or Botswana Qualifications Authority (BQA) Policies.

Candidates will (where applicable, either submit evidence of prior learning/current competence) undergo appropriate forms of RPL assessment for the award of credits towards the qualification in accordance with applicable policies as articulated in the ETP policies and guided by BQA legislative

CREDIT ACCUMULATION AND TRANSFER

Credit Accumulation and Transfer (CAT) will be used towards awarding the qualification in accordance with the institutional policies.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

LEARNING PROGRESSION

The graduates can progress academically in to the following

Horizontal progression:

- Certificate V in farm management
- Certificate V in animal husbandry
- Certificate V in landscaping

Vertical progression:

- Diploma in Sustainable Horticulture and Landscaping (NQF Level 6 SAQA ID: 97807)
- Diploma in Ornamental Horticulture (NQF Level 6 SAQA ID: 83107)

EMPLOYMENT PATHWAYS

After completion of the qualification graduates can be employed as:

- Horticulture Farm Assistant
- Plant Breeders
- Fruit production assistants
- Articulation to Level 6 Qualifications

QUALIFICATION AWARD AND CERTIFICATION

Qualification Award

On completion of all the required modules (130 credits) learners will be awarded a Certificate V in Horticulture.

Certification

On satisfactory completion of the required credits, a Certificate will be awarded to graduates.

SUMMARY OF REGIONAL AND INTERNATIONAL COMPARABILITY

This Subject Benchmark Statement sets out the threshold, typical and excellent levels of achievement that a student will have demonstrated when they are awarded a Certificate V Horticulture similar to the qualifications articulated in this section. Demonstrating these standards over time will show that a student has achieved the range of knowledge, understanding and skills expected of graduates in these qualifications. (www.qaa.ac.uk, 2024).

Regional:

There are no qualifications in the Region which are similar to this Certificate V Horticulture.

International:

1. Level 5 Certificate in Horticulture (QQI)

The comparison is as follows:

Similarities

- The Titles which are Certificate in Horticulture and Certificate V in Horticulture are the same.
- They are both 120 credits.
- The Certificate in Horticulture (QQI) and Certificate V in Horticulture (NCQF) are both level 5.
- Outcomes are similar and will achieve the same intended product.
- The modules are generally the same except that the QQI Level 5 qualification covers the following modules not in this qualification: Beekeeping, Applied Permaculture and Communications.

- The assessments for the two qualifications differ in that the QQI Level 5 is skewed towards formative assessment while the NCQF is skewed towards the Final Examination.
- The pathways to be followed are also similar and they can also articulate to higher qualifications.

Differences

The Duration for QQI Certificate in Horticulture is 1 while this qualification is two years offered to persons with disabilities.

2. BTEC HIGHER NATIONAL CERTIFICATE HORTICULTURE (LEVEL 4) – NQF UK.

The Certificate in Horticulture qualification was further compared with the Pearson Higher National Certificate in Horticulture from BTEC under the NQF (UK).

The comparison is as follows:

Similarities

- The Titles which are BTEC Higher National Certificate in Horticulture and Certificate V Horticulture are consistent in terms of Certificate in Horticulture but differ slightly.
- They are both 120 credits.
- The BTEC qualification is NQF Level 4 while this qualification is NCQF Level 5. The NQF (UK) Levels 4 and 5 are equivalent to NCQF (BW) Level 5.
- Outcomes are similar and will achieve the same intended product.
- The modules are generally the same except that the BTEC qualification covers the following modules not in this qualification: Managing a Successful Project (Pearson set) which adds great value to the qualification, Business and Business Environment (explicit in core units), Rural Business Administration, Human resource Management, and Marketing Essentials which are offered as electives..
- The pathways to be followed are also similar and they can also articulate to higher qualifications.

Differences

The Duration for BTEC Level 4 is 1 year but can be offered for two years as part-time while this qualification is two years offered to persons with disabilities.

3. CERTIFICATE III IN HORTICULTURE (AHC30716) - AQF AUSTRALIA.

The Certificate in Horticulture qualification was compared with the Certificate III in Horticulture under AQF (AU).

The assessments for the two qualifications differ in that the **Certificate III in Horticulture** Level III vary with each unit and an assessment guide is provided only to those institutions offering the qualification. But it is generally skewed towards formative assessment which is student centered while this NCQF qualification in **Certificate V in Horticulture** is skewed towards the Final Examination.

The comparison is as follows:

Similarities

- The Titles which are **Certificate III in Horticulture** and **Certificate V Horticulture** are the same except for the Levels. The AQF level 3 is equivalent to NCQF Level 5.
- These qualifications are both 120 credits.
- The **Certificate III in Horticulture** is AQF Level 3 while this qualification is NCQF Level 5. The AQF (AU) Levels 3 is equivalent to NCQF (BW) Level 5.
- Outcomes, though written differently, are similar and will achieve the same intended product.
- The modules are generally the same except that the **Certificate III in Horticulture** qualification has a unit entitled Contribute to work health and safety processes while this qualification calls it Work Practice. But the content of this two Units/Modules are the same eventhough more elaborate in AQF Level 3.
- The assessments for the two qualifications differ in that the **Certificate III in Horticulture** Level III vary with each unit and an assessment guide is provided only to those institutions offering the qualification. But it is generally skewed towards formative assessment which is

BQA NCQF QUALIFICATION TEMPLATE

student centered while this NCQF qualification in **Certificate V in Horticulture** is skewed towards the Final Examination.

- The pathways to be followed are also similar, they can also articulate to higher qualifications.

Differences

The Duration for **Certificate III in Horticulture** Level 3 is 1 year to 18 months while this qualification is two years.

REVIEW PERIOD

The qualification will be renewed after 5 years of implementation

(Note: Please use Arial 11 font for completing the template)

For Official Use Only:

CODE (ID)			
REGISTRATION STATUS	BQA DECISION NO.	REGISTRATION START DATE	REGISTRATION END DATE
LAST DATE FOR ENROLMENT		LAST DATE FOR ACHIEVEMENT	