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SECTION A: QUALIFICATION DETAILS											
QUALIFICATION DEVELOPER (S)		Gaborone University College of Law and Professional Studies									
TITLE	Certificate V in Vegetable Production								NCQF LEVEL	5	
FIELD	Agriculture and Nature Conservation			SUB-FIELD	Vegetable Production			CREDIT VALUE	120		
New Qualification					✓	Review of Existing Qualification					
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:											
<p>Agriculture is highly regarded as one of the fundamental drivers of the Botswana's economy. It is notable that agriculture is a source of income to many. In Botswana, the major form of agriculture is horticulture that involves vegetable production mostly. Therefore, this qualification prepares learners and enables them to give advice, equip them with entrepreneurial skills and prepare them to pursue further studies in the field of agriculture.</p> <p>The NDP highlights the need to expand agriculture in Botswana. The expansion of the sector requires the services of professionally qualified personnel. This qualification is a bridge toward increasing qualified personnel in the field of agriculture in Botswana. As aimed by Vision 2036 this qualification is designed to fall within the vocational pathway which promotes self-reliance skills amongst the citizens of Botswana. More so, the qualification is developed to fulfil the current need of knowledge enhancement for qualified horticulturists in Botswana as pointed out in the HRDS report of 2016. As the Needs Assessment Survey reveals, the horticulture industry is in need for manpower with advanced knowledge and skills in genetics, plant breeding, micro-</p>											

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propagation, hydroponics, plant growth manipulation, advanced project management and introduction to research related to the agricultural industry.

This qualification seeks to address the need of the economy of to progress to an advanced level of specialization and managerial skills suitably required in the vegetable production industry. Also graduates will be able to progress to a Level 6 and 7 qualifications in the field of agriculture. Ideally this qualification is a key foundation in preparing the learners for higher level qualifications. The nature of this qualification is also aligned to the needs of the Botswana economy because it encompasses the theoretical, practical, and managerial skills required in the vegetable production industry in Botswana.

PURPOSE:

The purpose of this qualification is to produce graduates who have broad technical knowledge, cognitive and practical skills, and competencies to:


- Demonstrate technical knowledge on vegetable production and management.
- Apply technical understanding of the principles and practices of sustainable vegetable crops production and physiology.
- Apply technical knowledge on commercial vegetable production industry.
- Demonstrate knowledge about production aspects such as soil fertility, irrigation, pest management, harvest and post-harvest, and marketing.
- Apply a broad range of cognitive and practical communication skills within the vegetable production environment.

ENTRY REQUIREMENTS (including access and inclusion)


Minimum entry requirement

- Certificate III (NCQF Level 3) or equivalent.
- Applicants may also be admitted into this qualification based on Recognition of Prior Learning (RPL) and Credit Accumulation Transfer (CAT) in accordance with the institution’s RPL and CAT policies in line with the National RPL and CAT Policies.

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SECTION B QUALIFICATION SPECIFICATION	
GRADUATE PROFILE (LEARNING OUTCOMES)	ASSESSMENT CRITERIA
LO 1. Apply a broad range of cognitive and practical communication skills within the vegetable production environment.	1.1. Use written, verbal and non-verbal aspects of communication in agricultural environment. 1.2. Implement the language and texts used in communication in all contexts. 1.3. Prepare formal and informal business communiqués. 1.4. Plan appointments with clients. 1.5. Deliver business presentations.
LO 2. Apply technical knowledge on commercial vegetable production industry.	2.1. Measure and count using numbers in agricultural environment. 2.2. Calculate simple fractions and decimals related to measurements of plots or ploughing fields. 2.4. Implement proper use of number sequence, i.e., batch numbers within agricultural environment. 2.5. Calculate money in Pula and Thebe (related to pay, deductions, price, etc.) in agricultural environment. 2.6. Use business related theories and skills in agricultural environment. 2.7. Employ underpinning principles of natural science in agricultural environment.
LO 3. Demonstrate technical knowledge on vegetable production and management.	3.1 Control an agricultural input chain. 3.2 Develop a strategic plan for agro-processing activities. 3.3 Integrate marketing as a part of the total agri-business. 3.4 Interpret financial information in an agro-business organisation.

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<p>LO 4. Demonstrate knowledge about production aspects such as soil fertility, irrigation, pest management, harvest and post-harvest, and marketing.</p>	<p>4.1 Show the process of optimisation of water quality in an agricultural production system.</p> <p>4.2 Develop a management system for food safety.</p> <p>4.3 Use quality practices in an agricultural supply chain.</p> <p>4.4 Incorporate the importance of natural resource management in relation to agricultural practices.</p> <p>4.5 Design a natural resource management plan of the farm in relation to local government structures and policies.</p> <p>4.6 Determine the most appropriate and sustainable land-use for different parts of the land.</p> <p>4.7 Maintain selected infrastructure for farm use.</p>
<p>LO 5. Apply technical understanding of the principles and practices of sustainable vegetable crops production and physiology</p>	<p>5.1 Identify the basic biochemistry involved in the physiological processes of a plant.</p> <p>5.2 Develop a soil fertility and plant nutrition plan.</p> <p>5.3 Use different methods of propagation for plant production.</p> <p>5.4 Implement different harvesting plans.</p> <p>5.5 Control pests in crop and plant production.</p> <p>5.6 Integrate pest management principles to conserve the environment.</p>

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SECTION C	QUALIFICATION STRUCTURE				
COMPONENT	TITLE	Credits Per Relevant NCQF Level			Total <i>(Per Subject/ Course/ Module/ Units)</i>
		Level [5]	Level []	Level []	
FUNDAMENTAL COMPONENT <i>Subjects/ Courses/ Modules/Units</i>	Introduction to Information Technology	20			20
	Entrepreneurial Skills	20			20
CORE COMPONENT <i>Subjects/Courses/ Modules/Units</i>	Vegetable Classification	20			20
	Site Selection	20			20
	Nursery Establishment	20			20
	Soil and Climate	20			20
ELECTIVE/ OPTIONAL COMPONENT <i>Subjects/Courses/ Modules/Units</i>					
	NONE				

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SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL	
TOTAL CREDITS PER NCQF LEVEL	
NCQF Level	Credit Value
Level 5	120
TOTAL CREDITS	120
Rules of Combination: (Please Indicate combinations for the different constituent components of the qualification)	
<ul style="list-style-type: none"> • This qualification is comprised of Level 5 components only. • This qualification has 2 Fundamental components of 20 Credits each = 40 Credits • There are 4 Core components of 20 credits each = 80 Credits • All components (Core and Fundamental) have same credit values. <p>There are no elective components in this qualification.</p>	

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ASSESSMENT ARRANGEMENTS

Assessment

All assessments leading to the awarding of this qualification will be based on learning outcomes associated with the following assessment criteria:

1. **Formative assessment**

The weighting of formative assessment is 70% of the final assessment mark.

2. **Summative Assessment**

The weighting of summative assessment is 30% of the final mark.

Assessment arrangements will be done by BQA registered and accredited assessors.

MODERATION ARRANGEMENTS

There shall be provision for internal and external moderation done by BQA registered and accredited Moderators.

RECOGNITION OF PRIOR LEARNING

There will be provision Recognition of Prior Learning (RPL) for award of the qualification through the use of ETP RPL Policy in line with the National RPL Policy.

CREDIT ACCUMULATION AND TRANSFER


There shall be access and award of credits of the qualification using Institutional Credit Accumulation and Transfer (CAT) Policy in line with the National CAT Policy.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

The graduates can progress academically into the following qualifications:

Horizontal Progression:

- Certificate V in Horticulture
- Certificate V in Animal Husbandry
- Certificate V in Veterinary
- Certificate V in Farm Management

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Vertical Progression:

- Diploma in Agriculture
- Diploma in Horticulture
- Diploma in Biotechnology

Employment Pathways:

Graduates of this qualification will find employment in sectors such as agricultural sector for positions of:

- Farm Assistants
- Farm Supervisors
- Vegetable Business owners

QUALIFICATION AWARD AND CERTIFICATION

Qualification award:

Learners who successfully earn a stipulated minimum of **120** credits as stipulated for this qualification will be awarded a **Certificate V in Vegetable Production**.


No part certification will be conferred to learners who do not meet the minimum credit requirements for this qualification. This qualification does not have exit awards.

Certification:

A **Certificate V in Vegetable Production** shall be issued to the candidate upon meeting the above-mentioned conditions.

REGIONAL AND INTERNATIONAL COMPARABILITY

To establish comparability, benchmarking was conducted on 2 identified similar qualifications internationally. Regionally, there was no qualification to benchmark against at an equivalent level. It was noted that SAQA has **National Certificate in Horticulture** is at NQF level 2 (equivalent to NCQF level 2), therefore, the Developer could not compare with it. The Developer benchmarked against it mainly because of its exit main outcomes. The benchmarking was looking at title of the qualification, entry requirements, credits allocation, NQF level at country of origin and either exit level outcomes or modules. The table below shows how the proposed qualification compares to the ones benchmarked against.

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Summary of Similarities and Differences observed:

University of the Fraser Valley (Canada) Certificate in Field Vegetable Production

When equating the level of this qualification (RQF Level 3) to NCQF, it is mapped to NCQF Level 5 which makes it equivalent to the proposed qualification. The qualification has only 4 modules which are like those of the proposed qualification except that the proposed qualification has included generic skills like Entrepreneurial Skills and Introduction to Information Technology. It is also noted that the entry requirements for this qualification (B.C. secondary school graduation or equivalent) is similar to the ones of the proposed qualification which states NCQF Level IV as the minimum entry requirement or equivalent.

ACS Distance Education (UK) Certificate in Vegetable Growing and Production

There is NQF level of this qualification is RQF Level 3 in which it equates to NCQF Level 5 of the proposed qualification when mapped into the NCQF. The entry requirements and credit allocation for this qualification were not indicated. The exit level outcomes and modules stated for this qualification compare similarly to the proposed qualification though the proposed qualification has included generic skills like Entrepreneurial Skills and Introduction to Information Technology which the above qualification did not.

A comparison of the proposed qualification with the above shows that the qualification learning outcomes/core modules and duration compares favourably with other qualifications of similar nature from other institutions. Moreover, the proposed qualification has an attachment module which the above qualifications do not have.

REVIEW PERIOD

Every five (5) years.

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