

## BQA NCQF QUALIFICATION TEMPLATE

SECTION A: QUALIFICATION DETAILS																			
<b>QUALIFICATION DEVELOPER (S)</b>				Madirelo Training and Testing Centre															
<b>TITLE</b>		Certificate V in Crop Farming						<b>NCQF LEVEL</b>			5								
<b>STRANDS (where applicable)</b>		1. 2. N/A 3. 4.																	
<b>FIELD</b>		Agriculture and Nature Conservation						<b>CREDIT VALUE</b>			120								
<b>SUB FIELD</b>		Crop Production																	
New Qualification		<input checked="" type="checkbox"/>		Legacy Qualification						Renewal Qualification									
										Registration Code									
<b>SUB-FRAMEWORK</b>		General Education						TVET		<input checked="" type="checkbox"/>		Higher Education							
<b>QUALIFICATION TYPE</b>		Certificate		I		II		III		IV		V	<input checked="" type="checkbox"/>	Diploma			Bachelor		
		Bachelor Honours						Post Graduate Certificate						Post Graduate Diploma					
		Masters								Doctorate/ PhD									
<b>RATIONALE AND PURPOSE OF THE QUALIFICATION</b>																			
<b>RATIONALE:</b> <p>The UN 2015 - 2030 Agenda: sustainable development goal (SDG) 2 on agriculture express the need to increase investment in research, development and demonstration of technologies to improve the sustainability of food systems due to expected changes in temperatures, precipitation and pests associated with climate change ensuring food security and good nutrition for all.</p>																			

The Botswana Vision 2036 states that development of the human capital and the informal sector and the micro and small enterprises (MSES) are essential in achieving the VISION 2036 pillars, in particular Sustainable Economic Development and Human and Social Development.

The Botswana Education and Training Sector Strategic Plan (ETSSP 2015-2020) marks a significant milestone in our collective efforts as a nation to bring about a more diversified and knowledge-based economy. ETSSP seeks to refocus our education and training towards fulfilment of social and economic aspirations identified in our Revised National Policy on Education (RNPE) 1994, NDP 11, Vision 2036 and as well as the Millennium Development Goals (MDG).

The HRDC report on top occupation in high demands recommends the need to consider development of niche programmes to align them to the top occupations in high demand identified by the employers in the Agriculture sector. The report on occupations in high demand identified among others farm managers, farm workers, and farm machine operators as some of the priority skills for the agricultural sector.

Through industrial consultation and various professionals, It has been reflected that most farm workers are either unskilled or attained skill through on job training, and that skilled man power is required in operation of farm machinery, plant protection, irrigation management, safety and health education.

Therefore, this TVET qualification intends to strengthen the match between crop farming qualifications and labour market requirements; by ensuring that education and training outputs are more closely aligned to socio-economic development needs of the country particularly in vegetables, fruits and rain-fed crop production sectors.

### **PURPOSE: (itemise exit level outcomes)**

The purpose of this qualification is to produce graduates with broad technical knowledge skills competence to:

1. Plan, organize and perform crop production activities under controlled agricultural environment.
2. Perform farm operations using farm machines and implements preparing soil, spreading fertilizers, planting seeds and controlling pests.

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3. Identify pests, select and apply eco-friendly pests control strategies to prevent crop damage preserving the environment.
4. Implement organic principles and strategies in crop production to produce crops.
5. Apply basic maintenance skills to construct and maintain farm structures.
6. Assess the viability of a chosen venture and develop its business plan and implementation schedule for submission to potential financiers.

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### MINIMUM ENTRY REQUIREMENTS (including access and inclusion)

- Certificate IV, NCQF Level 4 (TVET/GE) or equivalent.
- There will be provision for RPL and CAT for entry according to the national RPL and CAT policy.

### SECTION B

### QUALIFICATION SPECIFICATION

#### GRADUATE PROFILE (LEARNING OUTCOMES)

#### ASSESSMENT CRITERIA

1. Carry out crop production under a controlled agricultural environment.

- 1.1 Perform plant propagation techniques.
- 1.2 Demonstrate elementary comprehension of safety procedures in the propagation environment.
- 1.3 Perform crop production techniques and management in line with job specifications.
- 1.4 Maintain the production environment following practice standards and crop requirements.
- 1.5 Perform harvesting and handling of the crop produce.
- 1.6 Maintain records for monitoring purposes.

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<p>2. Perform farm operations using cost-effective farm machines and implements.</p>	<p>2.1 Select appropriate farm machines and implements for a given crop production enterprise.</p> <p>2.2 Operate farm machines considering safety precautions and practice standards.</p> <p>2.3 Operate farm implements considering safety precautions and practice standards.</p> <p>2.4 Conduct basic maintenance of farm machines.</p> <p>2.5 Conduct basic maintenance of farm implements.</p>
<p>3. Apply environmentally friendly pest management strategies to prevent crop damage.</p>	<p>3.1 Classify abiotic factors that cause damage to crops for a selected enterprise.</p> <p>3.2 Classify biotic factors that cause damage to crops for a selected enterprise.</p> <p>3.3 Develop a pest management program using pesticides to control pests.</p> <p>3.4 Adhere to safety protocols of handling agrochemicals.</p> <p>3.5 Implement Integrated Pest Management (IPM) principles.</p> <p>3.6 Maintain records for future reference.</p>
<p>4. Demonstrate organic farming principles in crop production.</p>	<p>4.1 Outline the procedures involved in converting from a non-organic to an organic farming system.</p> <p>4.2 Carry out organic soil quality and fertility improvement practices.</p> <p>4.3 Apply general standards for organic production to ensure highest level of animal welfare and environmental protection.</p> <p>4.4 Apply pests' management strategies in organic crop production to control pests.</p> <p>4.5 Carry out crop maintenance activities using</p>

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	<p>organic principles.</p> <p>4.6 Assess the economic viability for organic produce.</p>
5. Carry out construction of farm structures.	<p>5.1 Select materials used in farm structures in line with task specification.</p> <p>5.2 Describe minimum standard specifications for common components of farm structures.</p> <p>5.3 Interpret plans and specifications for construction of agricultural structures.</p> <p>5.4 Calculate quantities of materials required for a given construction project.</p>
6. Autonomously assess the viability of a chosen venture and develop its business plan and implementation schedule for submission to potential financiers.	<p>6.1 Identify and assess a venture of interest.</p> <p>6.2 Conduct a market survey to assess the viability of the project in its target area.</p> <p>6.3 Develop a plan for the chosen venture including an overview of the business, operations, marketing, human resources and financial projections adequate for funders.</p> <p>6.4 Schedule for implementation of the business plan in the form of a gantt chart (or any suitable presentation technique).</p>
7. Apply effective fundamental and problem solving skills while performing assigned duties/tasks according to the set industry standards in an actual work environment.	<p>7.1 Communicate and Negotiate and with stakeholders to initiate a industrious work based learning experience.</p> <p>7.2 Perform assigned vocation related tasks to the required standards.</p> <p>7.3 Apply effective fundamental (core) skills throughout the duration of the work based learning program.</p>

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	<p>7.4 Adhere to health and safety requirements at all times.</p> <p>7.5 Demonstrate problem solving skills as and when problems are encountered during the work process.</p> <p>7.6 Contribute effectively to team work initiatives within the work environment.</p> <p>7.7 Evaluate the work based learning experience, to determine its benefits and or limitations.</p>
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SECTION C		QUALIFICATION STRUCTURE			
COMPONENT	TITLE	Credits Per Relevant NCQF Level			Total Credits
		Level [ ]	Level [ ]	Level [5 ]	
<b>FUNDAMENTAL COMPONENT</b> <i>Subjects/ Courses/ Modules/Units</i>	Entrepreneurship			11	11
<b>CORE COMPONENT</b> <i>Subjects/Courses/ Modules/Units</i>	Farm Machinery			14	16
	Organic Farming			12	13
	Farm Structures			16	16
	Plant Protection			12	16
	Work Based Learning			48	48
<b>STRANDS/ SPECIALIZATION</b>	<i>Subjects/ Courses/ Modules/Units</i>	Credits Per Relevant NCQF Level			Total Credits
		Level [ ]	Level [ ]	Level [ ]	
1.					
2.					
<b>Electives</b>					

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<b>SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL</b>	
<b>TOTAL CREDITS PER NCQF LEVEL</b>	
<b>NCQF Level</b>	<b>Credit Value</b>
5	120
<b>TOTAL CREDITS</b>	<b>120</b>
<b>Rules of Combination:</b>	
<b>(Please Indicate combinations for the different constituent components of the qualification)</b>	
To be awarded this qualification, the candidate should achieve 120 credits;	
Fundamentals Level 5	11 Credits
Core Level 5	109 Credits
Total	120



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### ASSESSMENT ARRANGEMENTS

The weightings for the assessment will be as follows:

a) Formative assessment

The weighting of formative assessment is 60% of the final assessment mark.

b) Summative Assessment

The weighting of summative assessment is 40% of the final assessment mark

### MODERATION ARRANGEMENTS

Internal and external moderators perform assessments of the qualification. Both internal and external moderators are done in-line with the national assessment policy. Anyone moderating a learner against this qualification must be registered as moderator with BQA.

### RECOGNITION OF PRIOR LEARNING

There shall be provision for award of the qualification through Recognition of Prior Learning (RPL) in accordance with institutional policies in line with the national RPL policy.

### CREDIT ACCUMULATION AND TRANSFER

Credits Accumulated and Transfer will be administered in line with the national and institutional policy and will be administered towards the award of qualification

### PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

#### LEARNING PATHWAYS

##### Horizontal Articulation

Graduates of this qualification may consider pursuing related qualifications in the following:

- Certificate V in Forestry
- Certificate V in Horticulture
- Certificate V in Mixed Farming
- Certificate V in Plant Production
- Certificate V in Agriculture

##### Vertical Articulation

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Graduates may progress to Level 6 in, but not limited to:

- Diploma Crop Farming
- Diploma Horticulture
- Diploma Plant Production

### Employment Pathways

On successful completion of this qualification the holder may be absorbed in the job market as but not limited to:

- Farm Supervisor / Assistant Farm Manager
- Technical Assistant
- Entrepreneur

### **QUALIFICATION AWARD AND CERTIFICATION**

#### **Minimum standards of achievement for the award of the qualification**

A candidate is required to achieve the stipulated total of 120 credits, 109 credits for core units and 11 credits for fundamental to be awarded Certificate V in Crop Farming.

#### **Certification**

Candidates meeting prescribed requirements will be awarded Certificate in addition to transcript.

### **SUMMARY OF REGIONAL AND INTERNATIONAL COMPARABILITY**

Both the National Diploma: Plant Production, NQF Level 5, Certificate in Agriculture, NQF Level 5 and Certificate in Agriculture - Crops and Machinery Management, NQF Level 5 compare well with the developed qualification in terms of exit outcomes.

Though the titles differ, the qualification are closely related. The exit outcomes Focus on common broad technical knowledge and skills in crop production. Graduates are expected to perform complex work in relation to managerial skills in agri-business related to farm operations, agricultural skills in crop production and agricultural industry, safety and security at the work place, performing specific crop production techniques such as land preparation, planting, pest management, irrigation, harvesting and others related tasks and relevant sustainable systems to agriculture, horticulture and land use production including nursery production and fruit production.

Both of the qualifications assessment strategy is integrated form of assessment: theory and practical assessment. Assessment may involve a range of assessment methods such as observation, product evidence, and questioning. Qualification entry of all qualification is certificate at NQF level 4. The qualifications have both indicated their educational pathways and career

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pathways as recognized by the International Standard Classification of Occupations - ISCO – 08.

However all the qualification compared differ in terms of minimum credits for the award and rules of combination. The qualifications compared with the developed contain equal number of total credits of 120, except National Diploma: Plant Production, NQF Level 5 which is at 240 credits. The Certificate in Agriculture, NQF Level 5, and Certificate in Agriculture - Crops and Machinery Management, NQF Level 5 has a wide range of optional units that focus on animal production

### REVIEW PERIOD

The qualification will be reviewed every 5 years

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