

| SECTION A:  | QUALIFICATION DETAILS |                                  |      |      |         |       |                   |          |                          |  |                  |  |       |     |   |
|---|-----------------------|----------------------------------|------|------|---------|-------|-------------------|----------|--------------------------|--|------------------|--|-------|-----|---|
| QUALIFICATION DEVELOPER(S) Madirelo Training and Testing Centre |                       |                                  |      |      |         |       |                   |          |                          |  |                  |  |       |     |   |
| TITLE   | Certificate           | Certificate III In Crop Farming  |      |      |         |       |                   |          | NCQF LEVEL               |  |                  |  |       | 3   |   |
| STRANDS (where  | N/A                   | N/A                              |      |      |         |       |                   |          |                          |  |                  |  |       |     |   |
| applicable)   |                       |                                  |      |      |         |       |                   |          |                          |  |                  |  |       |     |   |
| FIELD   | Agricultur            | e And                            | Natu | re ( | Conserv | ation |                   |          | CREDIT VALUE             |  |                  |  |       | 120 | , |
| SUB FIELD   | Crop Prod             | Crop Production                  |      |      |         |       |                   |          |                          |  |                  |  |       |     |   |
| New Qualification   | ✓                     | ✓ Legacy                         |      |      |         |       |                   | Rene     | enewal Qualification     |  |                  |  |       |     |   |
|   |                       | Qualification                    |      |      |         |       | Registration Code |          |                          |  |                  |  |       |     |   |
| SUB-FRAMEWORK   | General E             | General Education                |      |      |         | TVET  |                   |          | ✓                        |  | Higher Education |  | ation |     |   |
| QUALIFICATION   | Certificate           |                                  | II   |      | Ш       | 1     | IV                |          | ٧                        |  | Diploma          |  | Bache | lor |   |
| TYPE  |                       |                                  |      |      |         |       |                   |          |                          |  |                  |  |       |     |   |
|   | Bachelor Ho           | chelor Honours Post Graduate Cer |      |      |         |       |                   | ertifica | ate Post Graduate Diplor |  |                  |  |       | ma  |   |
|   | Masters               | asters                           |      |      |         |       |                   |          | Doctorate/ PhD           |  |                  |  |       |     |   |

### RATIONALE AND PURPOSE OF THE QUALIFICATION

### RATIONALE:

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.

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

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.

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 fulfilmentof 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 occupations in high demand recommends the need to consider the 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 manpower isrequired in operation of farm machinery, plant protection, irrigation management, safety and healtheducation.

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 invegetables, fruits and rain-fed crop production sectors.

### PURPOSE: (itemise exit level outcomes)

The purpose of this qualification is to produce graduates with basic operational and theoretical knowledge skills and competence to:

- Identify suitable land and environment for crop production according to a variety of land use options and criteria.
- 2. Utilize farm tools, implements and equipment safely and efficiently for specific purposes.
- 3. Prepare soil by hand or machine and spread fertilizers to improve soil quality.
- 4. Perform basic crop husbandry practices; selecting and sowing seeds, and planting seedlings, weeding and pest control, pruning, harvesting, cleaning, grading and packaging produce for market delivery.
- 5. Communicate with clients, colleagues and others using appropriate forms of communication techniques.
- 6. Use ICT for information retrieval and processing as well as communication and collaboration with others.

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

- Certificate II, NCQF Level 2 or equivalent.
- Applicant may be considered through Recognition of Prior Learning (RPL) and Credit Accumulation and Transfer (CAT) in line with ETP policies.

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| SECTION B QUALI                               | FICATION SPECIFICATION  |  |  |  |  |  |
|---|---|--|--|--|--|--|
| GRADUATE PROFILE (LEARNING                    | ASSESSMENT CRITERIA   |  |  |  |  |  |
| OUTCOMES)                                     |   |  |  |  |  |  |
| 1. Carry out appropriate crop husbandry       | 1.1 Collect and organise information to apply safety, health and            |  |  |  |  |  |
| practices to improve crop quality and yield.  | environmental principles and procedures for the selected                    |  |  |  |  |  |
|   | tasks.  |  |  |  |  |  |
|   | 1.2 Use appropriate equipment to propagate plants in                        |  |  |  |  |  |
|   | accordance with practice standards.   |  |  |  |  |  |
|   | 1.3 Display specific propagation procedure for a specific plant in          |  |  |  |  |  |
|   | accordance with practice standards.   |  |  |  |  |  |
| •   | 1.4 Use appropriate materials, tools and equipment to perform               |  |  |  |  |  |
|   | crop husbandry practices in line with task specification and                |  |  |  |  |  |
|   | organizational requirements.  |  |  |  |  |  |
| \   | 1.5 Perform quality checks on work done and make                            |  |  |  |  |  |
|   | improvements as needed.   |  |  |  |  |  |
| 2. Utilize appropriate farm tools, implements | 2.1 Select and use appropriate tools, implements and                        |  |  |  |  |  |
| and equipment safely and efficiently for      | equipment in line with task specification and organizational                |  |  |  |  |  |
| specific purposes.                            | requirements.  2.2 Apply safety measures in handling and use of farm tools, |  |  |  |  |  |
|   | implements and equipment in accordance with practice                        |  |  |  |  |  |
| DOT   | standards.  |  |  |  |  |  |
| DUJI  | 2.3 Perform routine maintenance tasks to agricultural tools,                |  |  |  |  |  |
| 0   | implements and equipment.   |  |  |  |  |  |
| &uaiiica                                      | 2.4 Store tools, implements and equipment correctly and safely              |  |  |  |  |  |
|   | in designated areas.  |  |  |  |  |  |
| 3. Maintain different soil properties for     | 3.1 Collect and organise information to apply safety, health and            |  |  |  |  |  |
| specific crop plants.                         | environmental principles and procedures for the selected                    |  |  |  |  |  |
|   | tasks.  |  |  |  |  |  |
|   | 3.2 Use basic knowledge and principles of soil science to                   |  |  |  |  |  |
|   | identify suitable soil types for specific crops.                            |  |  |  |  |  |
|   | 3.3 Prepare the soil for crop planting in accordance with practice          |  |  |  |  |  |
|   | standards and crop requirements.  |  |  |  |  |  |
|   | 3.4 Carry out processes for maintaining suitable soil properties            |  |  |  |  |  |
|   | for healthy plant growth.   |  |  |  |  |  |



| 4. Identify high yield potential areas       | 4.1 Carry out data collection on soil, climate and other          |  |  |  |  |  |
|--|---|--|--|--|--|--|
| according to a range of land use options and | environmental factors suitable for crop production.               |  |  |  |  |  |
| criteria.                                    | 4.2 Collect data on proximity and accessibility of the proposed   |  |  |  |  |  |
|  | agricultural land.  |  |  |  |  |  |
|  | 4.3 Evaluate and analyse the collected data to determine          |  |  |  |  |  |
|  | suitability of an agricultural land.                              |  |  |  |  |  |
|  | 4.4 Select suitable enterprise for a selected agricultural land.  |  |  |  |  |  |
|  | 4.5 Design and implement a farm layout on agricultural land for   |  |  |  |  |  |
|  | a selected enterprise.  |  |  |  |  |  |
|  | 4.6 Select and practice cost effective ways of operation for      |  |  |  |  |  |
|  | improved performance of the enterprise.                           |  |  |  |  |  |
| 5. Communicate with clients, colleagues      | 5.1 Use written, verbal, non-verbal communication appropriate     |  |  |  |  |  |
| and others using appropriate forms of        | to the target audience.   |  |  |  |  |  |
| communication techniques                     | 5.2 Interpret stipulated instructions or requirements             |  |  |  |  |  |
|  | 5.3 Apply information acquired in the performance of tasks or     |  |  |  |  |  |
|  | discus <mark>sions</mark> with other people                       |  |  |  |  |  |
|  | 5.4 Apply relevant definitions, terminology, abbreviations and    |  |  |  |  |  |
|  | language.   |  |  |  |  |  |
|  | 5.5 Present information using appropriate language and            |  |  |  |  |  |
|  | formats.  |  |  |  |  |  |
|  | 5.6 Construct clear sentences to produce a written logical and    |  |  |  |  |  |
|  | coherent piece of writing.  |  |  |  |  |  |
| 0  | 5.7 Use appropriate presentation formats and styles of writing to |  |  |  |  |  |
| &ualitic(                                    | produce error free business documents.                            |  |  |  |  |  |
| 6. Utilise ICT for information retrieval and | 6.1 Use ICT responsibly and ethically in accordance to protocols  |  |  |  |  |  |
| processing as well as communication          | and practices.  |  |  |  |  |  |
| and collaboration with others.               | 6.2 Manage information using ICT tools.                           |  |  |  |  |  |
|  | 6.3 Organize and synthesize information using ICT.                |  |  |  |  |  |
|  | 6.4 Implement data loss prevention strategies using ICT for       |  |  |  |  |  |
|  | safeguarding digital data integrity and ensuring a secure         |  |  |  |  |  |
|  | future.   |  |  |  |  |  |
|  | 6.1 Present information in a variety of formats using ICT.        |  |  |  |  |  |
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SECTION C

# **BQA NCQF QUALIFICATION TEMPLATE**

| COMPONENT            | TITLE                   | Credits Per | Total Credits |           |    |  |
|----------------------|-------------------------|-------------|---------------|-----------|----|--|
| COMPONENT            |                         | Level [III] | Level [IV]    | Level [V] |    |  |
| FUNDAMENTAL          | Communication Skills    | 10          |               |           | 10 |  |
| COMPONENT            | Information and         |             |               |           |    |  |
| Subjects/Courses/    | Communications          | 10          |               |           | 10 |  |
| Modules/Units        | Technology I(ICT)       |             |               |           |    |  |
| CORE COMPONENT       | Soils and Land          | 32          |               |           | 32 |  |
| Subjects/Courses/    | Preparation             | 32          |               |           | 32 |  |
| Modules/Units        | Crop Production         | 32          |               |           | 32 |  |
|                      | Farm Planning           | 20          |               |           | 20 |  |
|                      | Farm Tools and          | 16          |               |           | 16 |  |
|                      | Equipment               |             |               |           | 10 |  |
|                      |                         |             |               |           |    |  |
| STRANDS/             | Subjects/ Courses/      | Credits Per |               |           |    |  |
| SPECIALIZATION       | Modules/Units           | Level [ ]   | Level [ ]     | Level [ ] |    |  |
|                      |                         |             |               |           |    |  |
|                      |                         |             |               |           |    |  |
| SUMMARY OF CREDI     | T DISTRIBUTION FOR EACH | COMPONEN    | T PER NCC     | F LEVEL   |    |  |
| TOTAL CREDITS PER    | NCQF LEVEL              |             |               |           |    |  |
| NCQF Level           | Credit Value            |             |               |           |    |  |
| 3                    | zualilicalio            | 120         | umo           | IIIY      |    |  |
| TOTAL CREDITS        | 120                     |             |               |           |    |  |
| Pules of Combination |                         |             |               |           |    |  |

**QUALIFICATION STRUCTURE** 

**Rules of Combination:** 

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

Candidates are required to achieve a minimum total of **120** credits for the qualification inclusive of **20** credits for fundamental units and **100** credits for core units all at NCQF Level III.

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### ASSESSMENT ARRANGEMENTS

The weightings for the assessment will be as follows:

### 1. Formative assessment

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

#### 2. Summative Assessment

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

### **MODERATION ARRANGEMENTS**

Internal and external moderation are performed in assessments for the qualification. Assessors and moderators are BQA registered and accredited. Both internal and external moderation are done in-line with ETP policies.

#### 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**

There shall be provision for award of the qualification through Credit Accumulation and Transfer (CAT) in accordance with institutional policies.

# PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

## **Learning Pathways**

#### **Horizontal Articulation**

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

- Certificate III in Forestry
- Certificate III in Horticulture
- Certificate III in Mixed Farming
- Certificate III in Plant Production

### **Vertical Articulation**

Graduates may progress to Level IV qualification in, but not limited to:

- Certificate IV in Crop Farming
- Certificate IV in Forestry
- Certificate IV in Horticulture
- Certificate IV in Plant Production



### **Employment Pathways**

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

- Gardener
- Farm Worker
- Arborist Grounds Person

### **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 inclusive of the 20 fundamental and 100 core components to be awarded the Certificate III in Crop Farming.

### Certification

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

### SUMMARY OF REGIONAL AND INTERNATIONAL COMPARABILITY

### Regional:

National Vocational Certificate in Crop and Horticulture Production, Level 3, 100 Credits(Namibia).

National Certificate in Plant Production, NQF Level 3,120 credits minimum (South Africa)

International: Certificate in Horticulture (General), Level 3, 60 credits(New Zealand)

### Title of Qualification:

The title for the developed qualification and those benchmarked from are all Certificate qualification hence they have similarities. The difference is that the developed qualification has 120 Credits.

### **NQF** Level

The developed qualification is Certificate III in Crop Farming, level 3,120 credits similar to National Certificate in Plant Production, NQF Level 3,120 credits (South Africa).

It differs with the regional National Vocational Certificate in Crop and Horticulture Production, Level 3, 100 Credits(Namibia). It also differs with international Certificate in Horticulture (General), Level 3, 60 credits(New Zealand).

The regional qualification benchmark aligns well with the developed qualification with modules and learning outcomes as well as credits.



### **Credit Value or Duration**

The developed qualification compares well with Certificate in Certificate III In Crop Farming, level 3,120 credits similar to National Certificate In Plant Production, NQF Level 3,120 credits (South Africa).

## Main Exit Outcome(s)

All the qualifications are similar as they impart knowledge, skills and competence in crop production.

Domains/Modules/Courses/Subjects covered (Fundamental, core, electives .

Comparison was done and it indicates that all qualifications cover similar modules.

### **Assessment strategies and Weightings**

The assessment strategies are the same for both developed and benchmarked qualifications as they cover formative, summative and practical assessments.

### Qualification rules and minimum Standards for the award of the qualification

The developed qualifications have fundamentals and core modules whereas bench marked have fundamentals, core and electives.

### Comparability and articulation of the proposed qualification with the ones examined

The developed and benched marked qualifications allow learners to articulate horizontally and vertically. On successful completion of the qualifications the graduate can progress vertically to Certificate IV In Crop Farming. Graduates may proceed horizontally to Certificate III in relevant qualifications in Crop Production and vertically to relevant NQF Level IV qualification such as Certificate IV in Crop Farming, Certificate IV in Plant Production, Certificate IV in Forestry and Certificate IV in Horticulture. The qualification will produce semi-skilled farm workers who eligible for employment as Gardeners, Arborist Grounds person and Farm Workers in the field of agriculture.

The qualification will produce competent individuals across crop production sector who shall contribute to food security, quality production, sustainability and environmental responsibilities that promotes economic growth and supervision.

# **REVIEW PERIOD**

This qualification shall be reviewed every 5 years.

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| CODE (ID)             |                  |                           |              |     |  |  |  |
|-----------------------|------------------|---------------------------|--------------|-----|--|--|--|
| REGISTRATION STATUS   | BQA DECISION NO. | REGISTRATION              | REGISTRATION | END |  |  |  |
|                       |                  | START DATE                | DATE         |     |  |  |  |
|                       |                  |                           |              |     |  |  |  |
|                       |                  |                           |              |     |  |  |  |
|                       |                  |                           |              |     |  |  |  |
| LAST DATE FOR ENROLME | NT               | LAST DATE FOR ACHIEVEMENT |              |     |  |  |  |
|                       |                  |                           |              |     |  |  |  |
|                       |                  |                           |              |     |  |  |  |
|                       |                  |                           |              |     |  |  |  |
|                       |                  |                           |              |     |  |  |  |

