



**THE REPUBLIC OF UGANDA**  
Ministry of Education and Sports

**Business, Technical, Vocational Education and Training [BTVET] Subsector Reform**



**Assessment and  
Training Package**

**For**

**MAIZE FARMER**

**Qualification Level: 1**

**Occupational Cluster: Agriculture, Natural  
Resources and Environment**

**January, 2022**

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**Developed by:**

**Qualifications Standards Department  
Directorate of Industrial Training**

**Funded by:**

**Government of Uganda**

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Under BTVET Act, 2008 the functions of the Directorate of Industrial Training are:

- (a) To identify the needs of the labour market for occupational competencies that fall under the UVQF;
- (b) To regulate apprenticeship schemes;
- (c) To foster and promote entrepreneurial values and skills, as an integral part of the UVQF;
- (d) To secure adequate and sustainable financing for the efficient operations of the Directorate;
- (e) To accredit training institutions or companies as assessment centers;
- (f) To determine fees payable under the Act;
- (g) To develop, apply, expand and improve the purposeful application of Uganda Vocational Qualifications defined in the UVQF;
- (h) To assess and award Uganda Vocational Qualifications;
- (i) To promote on-the-job training in industry for apprenticeship, traineeship and indenture training and for other training such as further skills training and upgrading; and
- (j) To prescribe the procedure for the making of training schemes

Further to the above provisions, there is an established Uganda Vocational Qualifications Framework (UVQF), under part V of the BTVET Act, 2008. It is stated that:

The purpose of the UVQF is to define:

- (a) Occupational standards in the world of work;
- (b) Assessment standards;
- (c) Vocational qualifications of learners who meet the set standards of different studies;
- (d) Provide guidelines for modular training.

The UVQF shall follow principles of Competence Based Education and Training (CBET) which include:

- (a) Flexible training or learning modules;
- (b) Positive assessment and Certification;
- (c) Assessment of Prior Learning;
- (d) Recognition of formal and non-formal training;
- (e) Self-paced or individual learning; and
- (f) Work place learning

For award and recognition of certificates, the BTVET Act, 2008 provides that:

- (1) The Directorate and other examination boards established under the Act shall award certificates and diplomas for Business, Technical or Vocational education and training under the UVQF;
- (2) The Certificates and Diplomas to be awarded shall be in the form prescribed by the Minister on the recommendation of the Industrial Training Council;
- (3) The Certificates and Diplomas awarded under the Act shall be recognized in the Uganda education system and by the labour market.

Under the TVET Implementation Standards 2020, the proposed new mandate of the Directorate of Industrial Training shall be restricted to promoting the highest standards in the quality and efficiency of industrial training in the country and ensuring an adequate supply of properly trained manpower at all levels in the industry and the world of work.

The functions shall include:

- a) Regulating Industrial training and trainers,
- b) Developing industrial training curricula,
- c) Harmonizing curricula and certificates of competence,
- d) Assessing industrial training,
- e) Development of occupational standards and Assessment and Training Packages (ATPs) for Trade Testing for the industry and world of work and
- f) Awarding certificates in that respect.

At operational level in the Directorate, the Qualification Standards Department performs development tasks related to concepts, procedures and instruments for establishment of the UVQF in close collaboration with both public and private stakeholders in vocational training.

In particular, the Department organizes and coordinates the development of Assessment and Training Packages for use in competence-based vocational training as well as standards-based assessment and certification.

The Directorate has therefore produced this Assessment and Training Package for use in implementing Competence-Based Education and Training mechanisms.

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## Word from Permanent Secretary

The Ministry of Education and Sports (MoES) through the Directorate of Industrial Training Conducts Competence Based Assessment.

The advantages of CBET include improved access, equity and relevance of BTVET, reduced unit costs of training, and recognition of Prior Learning (or on-the-job- training), among others.

As the Ministry executes its obligation of ensuring quality in training standards, the public-private partnership is being strengthened to improve occupational competence of the country's workforce without gender bias.

Further, efforts to link Education and Training to the real world of work, the Ministry through the BTVET department set up the Uganda Vocational Qualification Framework (UVQF) Secretariat in 2004 which was main-streamed into DIT in 2008 as the Qualifications Standards Department.

To achieve the set-out targets in the reform process, the Directorate embarked on the anticipated UVQF design and development piloting its instruments and mechanisms in order to effectively enhance Competence-Based Education and Training (CBET) in Uganda.

To date, the Qualifications Standards Department of DIT has produced Assessment and Training Packages (ATP) for various occupations. Each ATP contains 3 parts namely:

1. Occupational/job Profile
2. Training modules and
3. Assessment instruments Banks

The ATP can be used by any training provider and/or those who wish to present themselves for Occupational Assessment and Certification.

Herewith, the Directorate of Industrial Training presents the "Assessment & Training Package (ATP)" for training, assessment and certification of **A MAIZE FARMER - QUALIFICATION LEVEL I**

Finally, I thank all individuals, organizations and development partners who have contributed and/or participated in the review of this noble document.

**Ketty Lamaro**  
**Permanent Secretary**

## Executive Summary

This Assessment and Training Package is a Competence-Based Education and Training (CBET) tool and consists of three major parts:

- 0.1 **PART I: The “Occupational Profile” (OP) of a MAIZE FARMER.** This Occupational Profile which was reviewed by Maize Farmers practicing in the world of work, mirrors the duties and tasks Maize Farmers are expected to perform in the world of work.
- 0.2 **PART II: “Training Modules”** in the form of guidelines to train **Maize Farmers** both on the job as well as in training centres (or combinations of both venues of learning). The Training Modules herein have been reviewed basing on the Occupational Profile and hence are directly relevant for employment.
- 0.3 **PART III: “Assessment Instruments”** in the form of performance (Practical) and written (theory) test items that can and should be used to assess whether a person complies with the requirements of employment as a **Maize Farmer**. These assessment instruments were developed jointly by job practitioners (Maize Farmer) and teachers based on the occupational profile and training modules<sup>1</sup>.
- 0.4 While the Occupational Profile (OP) contained in PART I of this document provides the information on **WHAT a person is expected to do** competently in the world of work, the test items, -including performance criteria- of PART III qualify the **HOW and/or HOW WELL a person must do the job.**

In combination, both parts -the OP and the test items- constitute the relevant ‘Assessment STANDARDS’ for competence-based assessment and certification for acquiring a credible Qualification for – Maize Farmer Qualification Level 1.

- 0.5 The modular format of the curriculum (PART II) allows learners to acquire job specific skills and knowledge (i.e. competencies) module by module. A single module can be accomplished within a relatively short duration of time allowing flexibility for learners to move directly into an entry level job, go for further modules or advance to higher levels of training. Modular courses allow more learners to access the training system because training centers as well as companies can accommodate more students in a given period of time.
- 0.6 In addition to improved access, equity and relevance of BTVET, the UVQF will also enable people who are convinced to have acquired competencies laid down in this ATP through prior training and on-the-job experience to access assessment and certification directly; be it on the basis of a single module, a group of modules or all modules pertaining to the occupation at once. This achievement will facilitate Recognition of Prior Learning (RPL).

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<sup>1</sup>In this document, only sample test items for assessing (practical) performance and occupational knowledge (theory) are included. A larger selection of test items can be obtained from an electronic Test Item Bank at Directorate of Industrial Training

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0.7 The parts of this Assessment and Training Package were sequentially reviewed as follows:

- i Part 1: Occupational Profile: **January 2022**
- ii Part 2: Training Modules: **January 2022**
- iii Part 3: Assessment Instruments (initial bank): **January 2022**

This ATP (or parts of it) may be periodically revised to match the dynamic trends in the occupation and hence issued in different versions.

**Patrick Byakatonda**  
**Ag Director**

## Acknowledgement

The Qualifications Standards Department of DIT wishes to sincerely acknowledge the valuable contributions to the review of this Assessment and Training Package by the following persons, Institutions and organizations:

- Members of the DIT Industrial Training Council;
- The Director and staff of DIT,
- Ministry of Education and Sports;
- The practitioners from the world of work;
- Teachers of Agriculture in various Secondary schools;
- Agriculture Curriculum Specialists from NCDC;
- Examination Specialist from UNEB;
- The facilitators involved in guiding the practitioners in their activities;
- The Government of Uganda for financing the review of this ATP;



## Abbreviations and Acronyms

A&C	Assessment & Certification
ATP	Assessment & Training Packages
BTVET	Business, Technical and Vocational Education and Training
CBET	Competency Based Education and Training
DIT	Directorate of Industrial Training
ITC	Industrial Training Council
GoU	Government of Uganda
LWA	Learning-working Assignment
MC	Modular Curriculum
MoES	Ministry of Education and Sports
OP	Occupational Profile
PEX	Practical Exercise
PTI	Performance (Practical) Test Item
QS	Qualification Standards
RPL	Recognition of Prior Learning
TIB	Test Item Bank
TVET	Technical, Vocational, Education and Training
UVQ	Uganda Vocational Qualification
UVQF	Uganda Vocational Qualifications Framework
WTI	Written (Theory) Test Item

## Key Definitions

<b>Assessment</b>	Assessment is the means by which evidence is gathered and judged to decide if an individual has met the stipulated assessment standards or not. Testing is a form of formal assessment.
<b>Certification</b>	Certification is a formal procedure to issue a certificate (qualification) to an individual that has demonstrated during formal assessment that he/she is competent to perform the tasks specified in the occupational profile.
<b>Competence</b>	Integration of skills, knowledge, attitudes, attributes and expertise in doing /performing tasks in the world of work to a set standard.
<b>Competency</b>	(Occupational) competency is understood as the ability to perform tasks common to an occupation to a set standard.
<b>CBET</b>	Competence-based education and training means that programmes: <ol style="list-style-type: none"><li>1. have content directly related to work</li><li>2. focus is on 'doing something well'</li><li>3. assessment is based upon industry work standards, and</li><li>4. curricula are developed in modular form</li></ol>
<b>Duty</b>	A Duty describes a large area of work in performance terms. A duty serves as a title for a cluster of related Tasks (see also: TASK).
<b>Learning-Working Assignment (LWA)</b>	LWA are simulated or real job situations / assignments that are suitable for learning in a training environment (e.g. "small projects"). In a working environment LWAs are real work situations /assignments.
<b>Modules</b>	Modules are part(s) of a curriculum. Modules can be considered as "self-contained" partial qualifications which are described by learning outcomes or competencies and which can be assessed and certified individually.
<b>Occupational Profile (OP)</b>	An Occupational Profile is an overview of the duties and tasks a job incumbent is expected to perform competently in employment. Occupational Profiles developed by practitioners from the world of work enhance the relevance of training and learning to the requirements of the world of work.

Occupational Profiles define WHAT a person is supposed to do in performance terms. It also contains generic information regarding related knowledge and skills, attitudes/behavior, tools, materials and equipment required to perform as well as trends/ concerns in the occupation.

Occupational profiles are the reference points for developing modular curricular and assessment standards

**Qualification**

A qualification is a formal recognition for demonstrating competence, based on formal assessment against set standards. A qualification is provided to the individual in form of a certificate specifying the nature of the competence.

**Task**

Job TASKS represent the smallest unit of job activities with a meaningful outcome. Tasks result in a product, service, or decision. They represent an assignable unit of work and have a definite beginning and ending point. Tasks can be observed and measured. *(see also: Duty)*

## 1.0 ATP-PART I

### Occupational Profile for a MAIZE FARMER

- 1.1 The OCCUPATIONAL PROFILE (OP) for “Maize Farmer” below defines the **Duties** and **Tasks** a competent Maize Farmer is expected to perform in the world of work (on the job) in Uganda and the East African region today.
- 1.2 Since it reflects the skill requirements of work life, the Occupational Profile is the reference document for the subsequent development of training modules and assessment instruments (test items) which are directly relevant to employment in Ugandan and the East African businesses and industries.
- 1.3 To ensure that the Occupational Profile is relevant for employment in Uganda and East Africa, the DIT used the method of “occupational/job profiling.”<sup>1</sup>

This approach involves the brainstorming of a panel of 8 to 12 competent job practitioners guided by trained and experienced facilitators. During a two-day workshop the panelists define the duties and tasks performed in employment, as well as the prerequisite skills, knowledge, attitudes, tools and equipment, and the future trends and concerns in the occupation/job.

- 1.4 The panelists, facilitators and coordinators who participated in reviewing this Occupational Profile for a MAIZE FARMER are listed on the following page.

<sup>1</sup> The DACUM-method was used. DACUM is an acronym for ‘Develop A Curriculum’

**Job Expert Panel**

**Mubiru Paddy**  
NCDC

**Joel Mpawulo**

**Tadare Desmond**  
Mubuku Irrigation Scheme

**Twesiime Innocent**  
NARO-Namulonge

**Isooba Jimmy**  
Iganga SS

**Otim Joseph**

**Edonia Consolate**  
UNEB Examiner

**Kyeepa Bosco**  
Ministry of Agriculture-Entebbe

**Cherotin Caroline**  
MoES

**Kiggundu George**  
Community Vision-Mbale

**Masereka Bernabas**  
Kasese SS

**Co-ordinator**  
**Mukyala E. Ruth**  
Directorate of Industrial Training

**Facilitators**  
**Asiimwe Janet**  
Directorate of Industrial Training

**Ainembabazi Faith**  
Directorate of Industrial Training

**Funded by**  
The Government of Uganda



**THE REPUBLIC OF UGANDA**  
**Ministry of Education and Sports**

Business, Technical and Vocational  
Education and Training (BTJET) Sub sector Reform

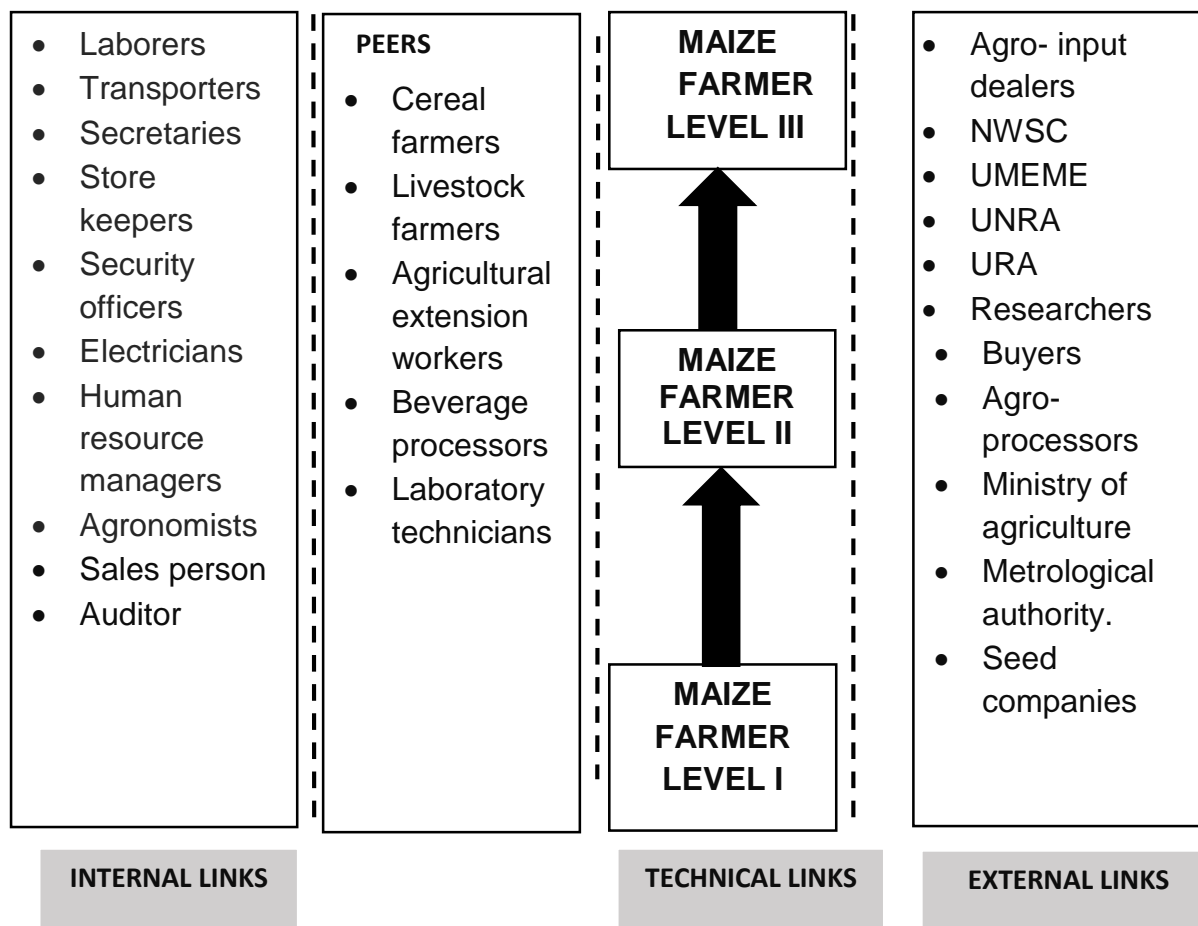
**Occupational Profile**  
**For a**  
**“MAIZE FARMER”**

**Reviewed by: Qualifications Standards**  
**Department of the Directorate**  
**of Industrial Training**

**Date of workshop: 3<sup>rd</sup>-7<sup>th</sup> January, 2022**

**NOMENCLATURE FOR THE OCCUPATION OF A MAIZE FARMER****Definition of a Maize Farmer**

Is a person who specializes in growing, processing of maize for home use and commercial purposes.

**JOB ORGANISATION CHART FOR A MAIZE FARMER****Descriptions for the levels in the occupation of a 'Maize Farmer'**

**UVQ Level 1 Maize Farmer:** is a person who grows maize using elementary agronomic practices for both subsistence and commercial purposes.

**UVQ Level 2 Maize Farmer:** is a person who grows maize using good agronomic practices with moderate technology for both home consumption and commercial purposes.

**UVQ Level 3 Maize Farmer:** is a person who grows maize on a larger scale using appropriate technology for commercial purposes.

### Duties and Tasks

<b>A. Plan maize farm work</b>	<b>A1.</b> Develop crop calendar	<b>A2.</b> Identify location.	<b>A3.</b> Survey site
	<b>A4.</b> Select site	<b>A5.</b> Identify farm inputs	<b>A6.</b> Prepare budget
	<b>A7.</b> Source capital	<b>A8.</b> Plan water source	
<b>B. Prepare land</b>	<b>B1.</b> Clear land	<b>B2.</b> Till land	<b>B3.</b> Level land
	<b>B4.</b> Demarcate land	<b>B5.</b> Fence land	<b>B6.</b> Construct soil and water conservation structures
<b>C. Plant maize</b>	<b>C1.</b> Space plant	<b>C2.</b> Dig holes	<b>C3.</b> apply fertilizers
	<b>C4.</b> Cover fertilizer.	<b>C5.</b> Place seed.	<b>C6.</b> Cover seed.
<b>D. Manage maize garden</b>	<b>D1.</b> Fill gaps with maize	<b>D2.</b> Weed plant	<b>D3.</b> Apply fertilizers
	<b>D4.</b> Thin plant	<b>D5.</b> Rogue plant	<b>D6.</b> Control pests and diseases.
	<b>D7.</b> Irrigate plant		
<b>E. Perform Harvest and post-harvest activities</b>	<b>E1.</b> Prepare store	<b>E2.</b> Identify labor	<b>E3.</b> Identify tools, equipment and materials.
	<b>E4.</b> Select tools equipment and materials	<b>E5.</b> Pick maize	<b>E6.</b> Transport maize
	<b>E7.</b> Thresh maize	<b>E8.</b> Sort grain	<b>E9.</b> grade grain
	<b>E10.</b> pack grain/bag grain	<b>E11.</b> Store grain.	

<b>F. Market maize product.</b>	<b>F1.</b> Survey market	<b>F2.</b> Advertise produce	<b>F3.</b> Package produce
	<b>F4.</b> Brand produce	<b>F5.</b> Price produce	<b>F6.</b> Transport produce
	<b>F7.</b> Sell produce	<b>F8.</b> Prepare income and expenditure record	

<b>G. Perform administrative tasks</b>	<b>G1.</b> Hire labor	<b>G2.</b> Procure tools and equipment	<b>G3.</b> Keep records
	<b>G4.</b> Manage expenses	<b>G5.</b> Organize meetings	<b>G6.</b> Supervise work
	<b>G7.</b> Coordinate activities	<b>G8.</b> Appraise workers	<b>G9.</b> Train workers

<b>H1. Perform occupational health, safety and environmental protection</b>	<b>H2.</b> Manage waste	<b>H3.</b> Sensitize workers on health issues	<b>H4.</b> Administer first aid
	<b>H5.</b> Install firefighting equipment	<b>H6.</b> Provide comprehensive insurance	<b>H7.</b> Use protective gear
	<b>H8.</b> Store chemicals	<b>H9.</b> Perform personal hygiene	<b>H10.</b> Maintain equipment
	<b>H11.</b> Plant trees	<b>H12.</b> Control soil erosion	



## Additional Information

### Generic Knowledge & Skills

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. Weeding</li> <li>2. Sowing maize</li> <li>3. Marketing</li> <li>4. Harvesting</li> <li>5. Spraying</li> <li>6. Fertilizers</li> <li>7. Cleaning and drying</li> <li>8. Knowledge in post-</li> </ol> | <ol style="list-style-type: none"> <li>9. harvest handling</li> <li>10. Good spacing</li> <li>11. Computer skills types of fertilizers</li> <li>12. Timely planting</li> <li>13. Sight survey</li> <li>14. Weather fore casting</li> <li>15. Market forecasting</li> </ol> |
|--|--|

### Tools, Materials and Equipment

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. Hoes</li> <li>2. Nails</li> <li>3. Watering can</li> <li>4. Iron sheets</li> <li>5. Ploughs</li> <li>6. Forked hoes</li> <li>7. Slashers</li> <li>8. Wheel barrows</li> <li>9. Pangas</li> <li>10. Marking strings</li> <li>11. Measuring tapes</li> <li>12. Gum boots</li> <li>13. Knap sack sprayers</li> <li>14. Overalls</li> <li>15. Stores</li> <li>16. Spraying pump</li> <li>17. Seeds</li> <li>18. Axes</li> </ol> | <ol style="list-style-type: none"> <li>18 Rakes</li> <li>19 Tarpaulin</li> <li>20 Marking pegs</li> <li>21 Ropes</li> <li>22 First aid kit</li> <li>23 Sacks</li> <li>24 Drying racks</li> <li>25 Fertilizers</li> <li>26 Spade</li> <li>27 Hallower</li> <li>28 Agro Chemicals</li> <li>29 Calculator</li> <li>30 Books</li> <li>31 Pens</li> <li>32 Tractor</li> <li>33 Buckets</li> <li>34 Jerry cans</li> <li>35 Weighing scale</li> </ol> |
|---|--|

<b>Attitudes/ Traits/ Behaviour</b>	<b>Future Trends and Concerns</b>
1. Innovative	1. Climate change
2. Punctual	2. Inadequate capital
3. Organized	3. Environmental degradation
4. Trust worthy	4. Cleaning and drying maize
5. Trainable	5. Quality of maize
6. Hard working	6. Market fluctuations
7. Team player	7. Price fluctuation
8. Creative	8. Trade blocks for better market
9. Good planner	9. Use of technology
10. Empathetic	10. Emerging pests and diseases
11. Result oriented	11. Value addition on the farm
12. Tolerant	12. Land conflicts
13. Honest and transparent	13. Land tenure system
14. Realistic	14. Proper storage facilities
15. Good listener	15. Insecurity
16. Fast learner	16. Pandemics
	17. Increased taxes

## 2.0 ATP – PART II

### Training Modules for MAIZE FARMER

- 2.1 A curriculum is a “guide /plan for teaching and learning” which provides a guide to teachers, instructors and learners. In the envisaged system of competence-based or outcome-oriented education and training (CBET), Curricula are no longer the benchmark against which assessment is conducted. It is rather the Occupational Profile that provides the benchmark for Curriculum development as well as assessment.
- 2.2 This modular format of the curriculum allows learners of Maize farmer to acquire job specific skills and knowledge (i.e. competencies) module by module. A single module can be accomplished within a relatively short duration of time allowing learners to move directly into an entry level job, do further modules and advance to higher levels of training. Modular courses allow more learners to access the training system because training centers, as well as companies can accommodate more students in a given period of time.
- 2.3 The modules were developed jointly by both instructors and job practitioners. They were developed using the Occupational Profile as a reference point and taking into account the specifications of training and learning outcomes.
- 2.4 The modules contain “Learning-Working Assignments” (LWAs) and related “Practical Exercises” (PEXs) as key elements.
- LWAs are simulated or real job situations/assignments that are suitable for learning in a training environment (e.g. “small projects”). In a working environment, LWAs are real work situations.
- PEXs are therefore sub-sets of a LWA.
- 2.5 In principle, and following the philosophy of Competence-Based Education and Training (CBET), the modules can be used as a guide for learning in a training Centre, at the workplace; or a combination of both.

**WHO IS A MAIZE FARMER QUALIFICATION LEVEL 1?**

A Maize Farmer Level 1 is a person who grows maize using elementary agronomic practices for both subsistence and commercial purposes.

**TRAINING MODULES FOR MAIZE FARMER UVQ LEVEL 1**

Code	Module Title	Average duration	
		Contact hours	Weeks
UE/MF/M1.1	Establish maize farm enterprise	80	02
UE/MF/M1.2	Establish maize garden	200	05
UE/MF/M1.3	Manage maize garden	160	04
UE/MF/M1.4	Perform harvest and post-harvest handling	160	04
UE/MF/M1.5	Market maize produce	120	03
<b>Summary</b>	<b>5 Training Modules</b>	<b>720 hours</b>	<b>18 weeks</b>

**Note: Average duration is contact time but NOT calendar duration**

It is assumed that:

- 1 day is equivalent to 8 hours of nominal learning and
- 1 month is equivalent to 160hours of nominal learning

Information given on the average duration of training should be understood as a guideline. Quick learners may need less time than indicated or vice versa.

At completion of a module, the learner should be able to satisfactorily perform the included Learning Working Assignments, their Practical exercises and attached theoretical instructions, as the minimum exposure.

Prior to summative assessment by recognized Agencies, the users of these Modules Guides are encouraged to carefully consider continuous assessment using samples of (or similar) performance (practical) and written test items available in part 3 of this ATP for **Maize Farmer**.

<b>Code</b>	<b>UE/MF/M1.1</b>
<b>Module title</b>	<b>M1.1: Establish maize farm enterprise</b>
<b>Related Qualification</b>	<u>Part of</u> Uganda Vocational Qualification (Maize Farmer UVQ 1)
<b>Qualification Level</b>	1
<b>Module purpose</b>	By the end the of this module, the trainee will be able to establish the maize enterprise
<b>Learning-Working Assignments (LWAs)</b>	<p><b>LWA1/1: Develop maize enterprise plan</b>  <b>LWA1/2: Perform administrative tasks</b>  <b>LWA1/3: Construct farm structures</b>  <b>LWA1/4: Perform occupational health, protection and environmental protection practices</b></p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. The learning exercises may be repeated till the Trainee acquires targeted competence;</li> <li>2. The Trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</li> </ol>
<b>Related Practical Exercises (PEXs)</b>	<p><b>LWA1/1: Develop maize enterprise plan</b>  PEX 1.1: Determine location  PEX 1.2: Determine source of funds  PEX 1.3: Prepare budget  PEX 1.4: Prepare crop calendar  PEX 1.5: Determine market  PEX 1.6: Determine human resource  PEX 1.7: Determine farm structures</p> <p><b>LWA1/2: Perform administrative tasks</b>  PEX 2.1: Acquire land  PEX 2.2: Secure land  PEX 2.3: Recruit workers  PEX 2.4: Train workers  PEX 2.5: Purchase inputs  PEX 2.6: Pay bills  PEX 2.7: Pay workers  PEX 2.8: Appraise workers</p> <p><b>LWA1/3: Construct farm structures</b>  PEX 3.1: Identify site  PEX 3.2: Select site  PEX 3.3: Select tools, equipment and materials</p>

	<p>PEX 3.4: Clear site  PEX 3.5: Demarcate site  PEX 3.6: Design structural plan  PEX 3.7: Hire labor  PEX 3.8: Erect structure</p> <p><b>LWA1/3: perform occupational health, safety and environmental protection practices</b></p> <p>PEX 3.1: Wear protective gear  PEX 3.2: Administer first aid  PEX 3.4: Keep personal hygiene  PEX 3.5: Manage wastes  PEX 3.6: Clean tools and equipment  PEX 3.7: Use visual aids  PEX 3.8: Perform fire fighting  PEX 3.9: Store tools, equipment and materials  PEX 3.10: Maintain tools and equipment</p>
<b>Occupational health and safety</b>	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs.
<b>Pre-requisite modules</b>	None
<b>Related knowledge/ theory</b>	<p><i>For Occupational theory suggested for instruction/ demonstration, the Trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i></p> <ul style="list-style-type: none"> <li>• Record keeping</li> <li>• Knowledge on farm structures</li> <li>• Knowledge on soil and water conservation</li> <li>• Managing human resource</li> <li>• Knowledge on environmental protection</li> </ul>
<b>Average duration of learning</b>	<p>80 hours (10 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> <li>• 4 days of occupational theory</li> <li>• 6 days of occupational practice</li> </ul>
<b>Suggestions on organization of learning</b>	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.
<b>Assessment</b>	Assessment to be conducted according to established regulations by recognized assessment body using related Practical and Written Test Items from Item Bank
<b>Minimum required tools/ equipment/ implements or equivalent</b>	Hoes, pangas, knapsack sprayers, rake, ropes, peg sticks, wheel barrow, measuring tape, calculator, iron sheets, hammer

<b>Minimum required materials and consumables or equivalent</b>	Pens, books, pencils, nails, timber, poles
<b>Special notes</b>	The theory must be integrated into the practice during training.

<b>Code</b>	<b>UE/MF/M1.2</b>
<b>Module title</b>	<b>M 1.2: Establish maize garden</b>
<b>Related Qualification</b>	<u>Part of</u> Uganda Vocational Qualification (Maize Farmer UVQ 1)
<b>Qualification Level</b>	1
<b>Module purpose</b>	By the end of this module, the trainee will be able to establish a maize garden.
<b>Learning-Working Assignments (LWAs)</b>	<p><b>LWA2/1: Prepare maize garden</b></p> <p><b>LWA2/2: Prepare seed</b></p> <p><b>LWA2/3: Plant maize</b></p> <p><b>LWA2/4: Perform occupational health, safety and environmental protection practices</b></p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. The learning exercises may be repeated till the Trainee acquires targeted competence;</li> <li>2. The Trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</li> <li>3. Order of execution may vary.</li> </ol>
<b>Related Practical Exercises (PEXs)</b>	<p><b>LWA2/1: Prepare maize garden</b></p> <p>PEX 1.1: Survey site</p> <p>PEX 1.2: Select site</p> <p>PEX 1.3: Select tools and equipment</p> <p>PEX 1.4: Clear land</p> <p>PEX 1.5: Demarcate land</p> <p>PEX 1.6: Till land</p> <p>PEX 1.6: Level land</p> <p>PEX 1.7: Fence land</p> <p><b>LWA2/2: Prepare seed</b></p> <p>PEX 2.1: Select seed</p> <p>PEX 2.2: Acquire seed</p> <p>PEX 2.3: Sort seed</p> <p>PEX 2.4: Test seed germinability</p> <p>PEX 2.5: Break dormancy</p> <p><b>LWA2/3: Plant maize</b></p> <p>PEX 3.1: Prepare tools</p> <p>PEX 3.2: Space plant</p> <p>PEX 3.3: Dig holes</p> <p>PEX 3.4: Apply fertilizer</p>



	<p>PEX 3.5: Cover fertilizer  PEX 3.6: Place seed  PEX 3.7: Cover seed</p> <p><b>LWA2/4: Perform occupational health, protection and environmental practices</b></p> <p>PEX 4.1: Wear protective gear  PEX 4.2: Administer first aid  PEX 4.4: Keep personal hygiene  PEX 4.5: Manage wastes  PEX 4.6: Clean tools and equipment  PEX 4.7: Use visual aids  PEX 4.8: Perform fire fighting  PEX 4.9: Store tools, equipment and materials  PEX 4.10: Maintain tools and equipment</p>
<b>Occupational health and safety</b>	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs
<b>Pre-requisite modules</b>	None
<b>Related knowledge/ theory</b>	<p><i>For Occupational theory suggested for instruction/ demonstration, the Trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i></p> <ul style="list-style-type: none"> <li>• Seed selection</li> <li>• Fertilizer application</li> <li>• Plant spacing</li> <li>• Handling of tools</li> <li>• Measurements</li> <li>• Digging holes</li> <li>• Procurement</li> <li>• Human resource management</li> </ul>
<b>Average duration of learning</b>	<p>200 hours (25 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> <li>• 5 days of occupational theory</li> <li>• 20 days of occupational practice</li> </ul>
<b>Suggestions on organization of learning</b>	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.
<b>Assessment</b>	Assessment to be conducted according to established regulations by recognized assessment body using related Practical and Written Test Items from Item bank.

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<b>Minimum required tools/ equipment/ implements or equivalent</b>	Hand hoe, strings, panga, containers, wheelbarrow, rakes, ox ploughs, oxen
<b>Minimum required materials and consumables or equivalent</b>	wooden pegs, seeds, fertilizers, u-nails
<b>Special notes</b>	The theory must be integrated into the practice during training.

<b>Code</b>	<b>UE/MF/M1.3</b>
<b>Module title</b>	<b>M1.3: Manage maize garden</b>
<b>Related Qualification</b>	<u>Part of</u> Uganda Vocational Qualification (Maize Farmer UVQ 1)
<b>Qualification Level</b>	1
<b>Module purpose</b>	By the end of this module, the trainee will be able to manage a maize garden.
<b>Learning-Working Assignments (LWAs)</b>	<p><b>LWA3/1: Fill gaps</b>  <b>LWA3/2: Thin maize</b>  <b>LWA3/3: Control weeds</b>  <b>LWA3/4: Apply fertilizers</b>  <b>LWA3/5: Conserve soil and water</b>  <b>LWA3/6: Control pests and diseases</b>  <b>LWA3/7: Perform occupational health, safety and environmental protection practices</b></p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. The learning exercises may be repeated till the Trainee acquires targeted competence;</li> <li>2. The Trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</li> </ol>
<b>Related Practical Exercises (PEXs)</b>	<p><b>LWA3/1: Fill gaps</b>  PEX 1.1: Scout garden  PEX 1.2: Dig holes  PEX 1.3: Place seed  PEX 1.4: Cover seed</p> <p><b>LWA3/2: Thin maize</b>  PEX 2.1: Scout garden  PEX 2.2: Count germinated plants  PEX 2.3: Remove excess plants  PEX 2.4: Dispose waste</p> <p><b>LWA3/3: Control weeds</b>  PEX 3.1: Scout garden  PEX 3.2: Prepare tools, equipment and materials  PEX 3.3: Weed plants</p> <p><b>LWA3/4: Apply fertilizers</b>  PEX 4.1: prepare tools, equipment and materials  PEX 4.2: Measure fertilizers  PEX 4.3: Place fertilizers</p>

	<p><b>LWA3/5: Conserve soil and water</b></p> <p>PEX 5.1: Construct bunds  PEX 5.2: Construct water dams  PEX 5.3: Construct contours  PEX 5.4: Harvest water  PEX 5.5: Construct terraces  PEX 5.6: Mulch garden</p> <p><b>LWA3/6: Control pests and diseases</b></p> <p>PEX 6.1: Scout pests and diseases  PEX 6.2: Assemble tools and equipment  PEX 6.3: Erect scare crows  PEX 6.5: Rogue plants  PEX 6.6: Identify chemical  PEX 6.7: Mix chemicals  PEX 6.8: Spray garden</p> <p><b>LWA3/7: Perform occupational health, safety and environmental protection practices</b></p> <p>PEX 3.1: Wear protective gear  PEX 3.2: Administer first aid  PEX 3.4: Keep personal hygiene  PEX 3.5: Manage wastes  PEX 3.6: Clean tools and equipment  PEX 3.7: Use visual aids  PEX 3.8: Perform fire fighting  PEX 3.9: Store tools, equipment and materials  PEX 3.10: Maintain tools and equipment</p>
<b>Occupational health and safety</b>	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs.
<b>Pre-requisite modules</b>	None
<b>Related knowledge/ theory</b>	<p><i>For Occupational theory suggested for instruction/ demonstration, the Trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i></p> <ul style="list-style-type: none"> <li>• Application rates of chemicals</li> <li>• Weeding</li> <li>• Disease identification</li> <li>• Environmental protection</li> <li>• Time of application</li> <li>• Tool identification</li> </ul>

<b>Average duration of learning</b>	160 hours (20 days) of nominal learning suggested to include: <ul style="list-style-type: none"> <li>• 5 days of occupational theory</li> <li>• 15 days of occupational practice</li> </ul>
<b>Suggestions on organization of learning</b>	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.
<b>Assessment</b>	Assessment to be conducted according to established regulations by recognized assessment body using related Practical and Written Test Items from Item Bank
<b>Minimum required tools/ equipment/ implements or equivalent</b>	Hoes, knapsack sprayers, jerry cans, wheelbarrow, spray pumps, drams, gum boots, headgears, gloves, watering can
<b>Minimum required materials and consumables or equivalent</b>	Water, chemicals, fertilizers
<b>Special notes</b>	The theory must be integrated into the practice during training.

<b>Code</b>	<b>UE/MF/M1.4</b>
<b>Module title</b>	<b>M1.4: Perform harvest and post-harvest handling</b>
<b>Related Qualification</b>	<u>Part of</u> Uganda Vocational Qualification (Maize Farmer UVQ 1)
<b>Qualification Level</b>	1
<b>Module purpose</b>	By the end of this module, the trainee will be able to perform harvest and post-harvest handling
<b>Learning-Working Assignments (LWAs)</b>	<p><b>LWA 4/1: Harvest maize</b></p> <p><b>LWA 4/2: Conduct post- harvest handling</b></p> <p><b>LWA 4/3: Perform occupational health protection and environmental protection practices</b></p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. The learning exercises may be repeated till the Trainee acquires targeted competence;</li> <li>2. The Trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</li> </ol>
<b>Related Practical Exercises (PEXs)</b>	<p><b>LWA4/1: Harvest maize</b></p> <p>PEX 1.1: Identify ,tools, materials and equipment</p> <p>PEX 1.2: Hire labor</p> <p>PEX 1.3: Prepare store</p> <p>PEX 1.4: Cut maize</p> <p>PEX 1.5: Pluck maize</p> <p>PEX 1.6: Pack maize</p> <p>PEX 1.7: Transport maize</p> <p><b>LWA4/2: Conduct post-harvest handling</b></p> <p>PEX 2.1: Dry maize</p> <p>PEX 2.2: Thresh maize</p> <p>PEX 2.3: Clean maize</p> <p>PEX 2.4: Sort maize</p> <p>PEX 2.5: Grade maize</p> <p>PEX 2.6: Package maize</p> <p>PEX 2.7: Store maize</p> <p><b>LWA4/3: Perform occupational health, safety and environmental protection practices</b></p> <p>PEX 3.1: Wear protective gear</p> <p>PEX 3.2: Administer first aid</p> <p>PEX 3.4: Keep personal hygiene</p> <p>PEX 3.5: Manage wastes</p> <p>PEX 3.6: Clean tools and equipment</p> <p>PEX 3.7: Use visual aids</p> <p>PEX 3.8: Perform fire fighting</p>

	PEX 3.9: Store tools, equipment and materials PEX 3.10: Maintain tools and equipment
<b>Occupational health and safety</b>	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs.
<b>Pre-requisite modules</b>	None
<b>Related knowledge/ theory</b>	<p><i>For Occupational theory suggested for instruction/ demonstration, the Trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i></p> <ul style="list-style-type: none"> <li>• Tool identification</li> <li>• First aid</li> <li>• Harvesting skills</li> <li>• Timing skills</li> <li>• Human resource management</li> <li>• Communication skills</li> <li>• Storage</li> <li>• Machine operation</li> <li>• Machine maintenance</li> </ul>
<b>Average duration of learning</b>	160 hours (20 days) of nominal learning suggested to include: <ul style="list-style-type: none"> <li>• 3 days of occupational theory</li> <li>• 17 days of occupational practice</li> </ul>
<b>Suggestions on organization of learning</b>	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.
<b>Assessment</b>	Assessment to be conducted according to established regulations by recognized assessment body using related Practical and Written Test Items from Item Bank
<b>Minimum required tools/ equipment/ implements or equivalent</b>	Bags, knife, wheelbarrows, pangas, store, gumboots, head gears, gloves, , threshing machines, tarpaulins, needle
<b>Minimum required materials and consumables or equivalent</b>	Strings, sorting mesh
<b>Special notes</b>	The theory must be integrated into practice during training

<b>Code</b>	<b>UE/MF/M1.5</b>
<b>Module title</b>	<b>M1.5: Market maize produce</b>
<b>Related Qualification</b>	<u>Part of</u> Uganda Vocational Qualification (Maize Farmer UVQ 1)
<b>Qualification Level</b>	1
<b>Module purpose</b>	By the end of this module, the trainee will be able to market the maize produce
<b>Learning-Working Assignments (LWAs)</b>	<p><b>LWA5/1: Promote produce</b>  <b>LWA5/2: package produce</b>  <b>LWA5/3: sell produce</b>  <b>LWA5/4: perform occupational health protection and environmental protection practices</b></p> <p><b><u>Note:</u></b></p> <ol style="list-style-type: none"> <li>1. The learning exercises may be repeated till the Trainee acquires targeted competence;</li> <li>2. The Trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</li> </ol>
<b>Related Practical Exercises (PEXs)</b>	<p><b>LWA 5/1: Promote produce</b>  PEX 1.1: Survey market  PEX 1.2: Price produce  PEX 1.3: Advertise produce  PEX 1.4: Give offers</p> <p><b>LWA5/2: Package produce</b>  PEX 2.3: Grade produce  PEX 2.4: Weigh produce  PEX 2.5: Package produce  PEX 2.6: Label produce  PEX 2.7: Brand produce  PEX 2.8: Seal produce</p> <p><b>LWA5/3: Sell produce</b>  PEX 3.1: Receive inquiries  PEX 3.2: Reply inquires  PEX 3.3: Negotiate price  PEX 3.4: Receive order  PEX 3.5: Confirm order  PEX 3.6: Send advise note  PEX 3.7: Transport produce  PEX 3.8: Issue delivery note  PEX 3.9: Send invoice  PEX 3.10: Issue receipts</p>



	<p><b>LWA5/4: Perform occupational health, safety and environmental protection practices</b></p> <p>PEX 4.1: Wear protective gear  PEX 4.2: Administer first aid  PEX 4.4: Keep personal hygiene  PEX 4.5: Manage wastes  PEX 4.6: Clean tools and equipment  PEX 4.7: Use visual aids  PEX 4.8: Perform fire fighting  PEX 4.9: Store tools, equipment and materials  PEX 4.10: Maintain tools and equipment</p>
<b>Occupational health and safety</b>	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs.
<b>Pre-requisite modules</b>	None
<b>Related knowledge/ theory</b>	<p><i>For Occupational theory suggested for instruction/ demonstration, the Trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognized reference materials as appropriate:</i></p> <ul style="list-style-type: none"> <li>• Market survey</li> <li>• Finance management</li> <li>• Human resource</li> <li>• Communication skills</li> <li>• Management and evaluation</li> <li>• Negotiation skills</li> <li>• Record keeping</li> <li>• Numeric skills</li> <li>• Costing skills</li> <li>• Branding skills</li> <li>• Weighing skills</li> </ul>
<b>Average duration of learning</b>	<p>120 hours (15 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> <li>• 5 days of occupational theory</li> <li>• 10 days of occupational practice</li> </ul>
<b>Suggestions on organization of learning</b>	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training center or its equivalent provided all equipment and materials required for training are in place.

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<b>Assessment</b>	Assessment to be conducted according to established regulations by recognized assessment body using related Practical and Written Test Items from Item Bank
<b>Minimum required tools/ equipment/ implements or equivalent</b>	Calculator, packaging materials, weighing scale, branding machine, sewing machine, thread, needles, flyers, tying strings, phone
<b>Minimum required materials and consumables or equivalent</b>	Pens, books, airtime, receipt book, invoice book, delivery note books
<b>Special notes</b>	The theory must be integrated into the practice during training

## 3.0 ATP- PART III

### Assessment Instruments for MAIZE FARMER

- 3.1 **Assessment** of occupational competence is the procedure by which evidence is gathered and judged to decide if an individual (candidate) has met the stipulated assessment standards.
- 3.2 Assessment of occupational competence should comprise of both practical (performance) testing and written (theory/knowledge) testing.
- 3.3 Based on the Occupational Profile and Training Modules, a combined panel of job practitioners and Instructors developed a substantial number of test items for assessing (practical) performance as well as items for assessing occupational knowledge (theory) all stored in an electronic Test Item Bank (TIB) at the Directorate of Industrial Training.
- 3.4 Performance (Practical) Test Items (PTI) are closely related to typical work situations in Ugandan business enterprises. They comprise of a test assignment for candidates and assessment criteria and/or scoring guides for assessors' use.
- 3.5 Written Test items (WTI) for written testing of occupational theory, (knowledge) are presented in different forms which include:
- Short answer test items.
  - Multiple choice test items
  - Matching test items,
- These WTIs herein focus on functional understanding as well as trouble-shooting typically synonymous with the world of work.
- 3.6 Composition of assessment/test papers will always require good choices of different types of WTI in order to ensure the assessment of relevant occupational knowledge required of candidates to exhibit competence.
- 3.7 The test items contained in the Test Item Bank may be used for continuous/formative assessment during the process of training as well as for summative assessment of candidates who have acquired their competences non-formally or informally.
- 3.8 In this document, samples of test items for assessing both performance (practical) and occupational knowledge (theory) of a **MAIZE FARMER** are included.

**3.9 Overview of Test Item Samples Included**

No	Type of test Items	Numbers included
1.	Written (Theory)- Short Answer	2
2.	Written (Theory)- Multiple Choice	2
3.	Written (Theory)- Matching with generic	1
4.	Written (Theory)- Matching with cause and effect	1
5.	Written (Theory)- Matching with work-sequence	1
6.	Performance(Practical)Test Items	1
	<b>Total</b>	<b>8</b>

**WRITTEN TEST ITEMS (SAMPLES)**

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 1		
Occupational Title:	Maize Farmer		
Competence level:	Level 1		
Code no.			
Test Item type:	Short answer	√	
	Multiple choice		
	Matching item	Generic	Cause- Effect
			Work-sequence
Complexity level:	C1		
Date of OP:	January, 2022		
Related module:	M3		
Time allocation:	2 minutes		

Test Item	List any three activities performed in managing a maize garden
Answer spaces	1. .... 2. .... 3. ....
Expected key (answers)	1. Fill gaps 2. Thin maize 3. Control weeds 4. Apply fertilizers 5. Control pests and diseases

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 2			
Occupational Title:	Maize Farmer			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer	√		
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
Complexity level:	C2			
Date of OP:	January, 2022			
Related module:	M2.3			
Time allocation:	3 minutes			

Test Item	Explain two methods of controlling striga weed in the garden
Answer spaces	1. .... 2. ....
Expected key (answers)	1. Intercropping with legumes 2. Crop rotation 3. Plant tolerant varieties 4. Chemical spraying 5. Use of push pull technology

DIT/ QS		Test Item Database Written (Theory) Test Item- no. 3			
Occupational Title:	Maize Farmer				
Competence level:	Level 1				
Code no.					
Test Item type:	Short answer				
	Multiple choice	√			
	Matching item	Generic	Cause- Effect	Work-sequence	
Complexity level:	C2				
Date of OP:	January, 2022				
Related module:	M3.2				
Time allocation:	2 Minutes				

Test Item	Which of the following is the reason for thinning maize
Distractors and correct answer	<ul style="list-style-type: none"> <li>A. Reduce competition</li> <li>B. Create space</li> <li>C. Control weed</li> <li>D. Reduce water loss</li> </ul>

Key (answer)	A
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DIT/ QS	Test Item Database Written (Theory) Test Item- no. 4			
Occupational Title:	Maize Farmer			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice	√		
	Matching item	Generic	Cause- Effect	Work-sequence
Complexity level:	C1			
Date of OP:	January, 2022			
Related module:	M5.2			
Time allocation:	2 Minutes			

Test Item	The following are steps involved in packaging maize produce except
Distractors and correct answer	<ul style="list-style-type: none"> <li>A. Transport produce</li> <li>B. Weigh produce</li> <li>C. Garden produce</li> <li>D. Label produce</li> </ul>

Key (answer)	C
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DIT/ QS		Test Item Database Written (Theory) Test Item- no. 5			
Occupational Title:	Maize Farmer				
Competence level:	Level 1				
Code no.					
Test Item type:	Short answer				
	Multiple choice				
	Matching item	Generic	Cause- Effect	Work- sequence	
		√			
Complexity level:	C1				
Date of OP:	January, 2022				
Related module:	M3				
Time allocation:	2 Minutes				

Test Item	Match the following tools to their uses
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Column A (Tools)	
1.	Panga
2.	Hoe
3.	Sprayer
4.	Ox plough

Column B (Uses)	
A.	Dig hole
B.	Slashing
C.	Weeding
D.	spraying
E.	ploughing
F.	Watering plants

Key (answer)	1:B, 2:A, 3:D, 4:E
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DIT/ QS	Test Item Database Written (Theory) Test Item- no. 6			
Occupational Title:	Maize Farmer			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
			√	
Complexity level:	C2			
Date of OP:	January, 2022			
Related module:	M4			
Time allocation:	3 Minutes			

<b>Test Item</b>	Match the following causes to their effects in harvest and post-harvest handling of maize
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Column A (Causes)	
1.	Poor drying
2.	Pre mature harvest
3.	Poor threshing
4.	Late harvesting
5.	Bush around the store
6.	Poor branding

Column B (Effects)	
A.	rotting
B.	Shrunked feeds
C.	Broken grain
D.	Grain loss
E.	Harbor storage pests
F.	Reduction in profits
G.	Increased yields
H.	Low germination

<b>Key (answer)</b>	1.A , 2.D, 3.G, 4.C,5.E,6.F
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DIT/ QS	Test Item Database Written (Theory) Test Item- no. 7			
Occupational Title:	Maize Farmer			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
				√
Complexity level:	C2			
Date of OP:	January, 2022			
Related module:	M2			
Time allocation:	3 Minutes			

Test Item	Arrange the steps followed when preparing a maize garden
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Column A (chronology)	Column B (work steps) in wrong chronology order	
1 <sup>st</sup>	A	Till garden
2 <sup>nd</sup>	B	Fence garden
3 <sup>rd</sup>	C	Demarcate garden
4 <sup>th</sup>	D	Clear site
5 <sup>th</sup>	E	Level garden

Key (answer)	1:D, 2:A, 3:C, 4:E, 5:B
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**PERFORMANCE TEST ITEMS (SAMPLES)**

<b>DIT/ QS</b>	<b>Test Item Database Performance Test Item- no. 8</b>
<b>Occupational Title:</b>	Maize Farmer
<b>Competence level:</b>	Level 1
<b>Code no.</b>	
<b>Test Item:</b>	On the provided piece of land measuring 20x20 meters, plant maize
<b>Complexity level:</b>	P2
<b>Date of OP:</b>	January, 2022
<b>Related module:</b>	M2
<b>Related skills and knowledge:</b>	Numeric skills, first aid skills, tool handling, knowledge on environmental protection, human resource management, planting skills, analytical skills, time management, communication skills, fertilizer application.
<b>Required tools, Materials and Equipment:</b>	Hand hoe, wooden pegs, sisal string, wheelbarrow, tape measure, slasher, stationary, water, seeds, fertilizers, tape measure, protective gears, containers
<b>Time allocation:</b>	8 hours
<b>Preferred venue:</b>	Maize farm
<b>Remarks for candidates</b>	Candidates must be dressed in full protective gear Observe health, safety and environmental practices
<b>Remarks for assessors</b>	<ul style="list-style-type: none"> <li>• Avail candidates with all required tools, equipment and materials</li> <li>• Provide all the guidelines</li> <li>• Provide a helper</li> <li>• Provide already prepared garden</li> </ul>

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
1.	Preparation before task	Wore protective gear <ul style="list-style-type: none"> <li>Boots</li> <li>Overall/over coat</li> <li>Gloves</li> <li>Headgear</li> </ul>		2
2.	Digging planting holes	Measured planting area	3	
		<ul style="list-style-type: none"> <li>Accurately measured planting area observed</li> </ul>		1
		Pegged area	3	
		<ul style="list-style-type: none"> <li>Pegged corners observed</li> </ul>		2
		Tied rope	2	
		<ul style="list-style-type: none"> <li>A tight rope and straight rope observed</li> </ul>		2
		Dug holes	2	
3.	Planting seed	Measured fertilizer	2	
		<ul style="list-style-type: none"> <li>Correct measurements observed</li> </ul>		1
		Applied fertilizers	2	
		<ul style="list-style-type: none"> <li>Covered fertilizer with soil</li> </ul>	1	
		<ul style="list-style-type: none"> <li>Lightly covered fertilizer observed</li> </ul>		2
		Placed seeds in planting hole	1	
		<ul style="list-style-type: none"> <li>Covered seeds lightly with soil</li> </ul>		2

4.	Post planting activities	Cleaned tool and equipment	1	
		<ul style="list-style-type: none"> <li>Clean tools and equipment observed</li> </ul>		2
		Stored tools	1	
		<ul style="list-style-type: none"> <li>Raised tools observed</li> </ul>		3
	TOTAL(Y)		18	17
	MAXIMUM SCORE(X)			

## 4.0 ATP- PART IV

### INFORMATION ON REVIEW PROCESS

#### 4.1 Occupational Profile Development (January, 2022)

The Assessment and Training Package was exclusively developed by job practitioners of the Maize Farmer occupation, Secondary School Teachers who double as examiners of Agriculture with the Uganda National Examinations Board (UNEB) and Curriculum Development Specialists working with the National Curriculum Development Centre (NCDC).

The job expert panel, guided by UVQF Facilitators developed duties and tasks performed and provided additional generic information regarding the occupation.

#### 4.2 Training Module Development (January, 2022)

Based on the developed Occupational Profile for Maize Farmer of January, 2022 Training Modules were developed by job practitioners, guided by UVQF Facilitators.

#### 4.3 Test Item Development (January, 2022)

Based on the developed Occupational Profile for Maize Farmer of January, 2022 and Training Modules of January 2022, Test Items were developed by combined panels of Teachers and job practitioners, guided by UVQF Facilitators.

#### 4.4 Methodology

The rationale for the Assessment and Training Package development was to link Vocational Education and Training to the real world of work by bridging Occupational Standards to Training Standards through industry-led Standards-Based Assessment.

Active participation of both teachers and job practitioners' panels consolidated the development philosophy.

The panelists worked as teams in workshop settings complemented by off-workshop field research and literature review activities including international benchmarking.

#### 4.5 Development Panels

The participating panels of Job Practitioners required at for the review exercise were constituted by members from the following organizations:

Development Panel		
No.	Name	Institution/Organization
1.	Tadare Desmond	Mubuku irrigation scheme
2.	Isooba Jimmy	Iganga SS
3.	Mubiru Paddy	NCDC
4.	Twesiime Innocent	Naro- Namulonge
5.	Joel Mpawulo	Iganga
6.	Masereka Barnabas	Kasese SS
7.	Otim Joseph	Otuke District
8.	Kiggundu George	Community Vision - Mbale
9.	Kyeepa Bosco	Ministry Of Agriculture - Entebbe
10.	Edonia consulate	UNEB
11.	Cherotin Caroline	MoES

#### 4.6 Facilitator team

This Assessment and Training Package was developed by a Facilitator team listed below:

1. **Team Leader** –Ms. Mukyala Ruth, Ag Deputy Director, DIT
2. **Facilitators** –Ms. Asiimwe Janet, DIT; Ms. Ainembabazi Faith, DIT.
3. **Compiled by** Ms. Namukasa Christiner, Namateefu Reneous Data Entrants, DIT and edited by Ms. Mukyala Ruth Ag. DD Qualification Standards Dept. DIT
4. **Coordinated by** – Mr. Byakatonda Patrick, Ag. Director, DIT; and Ms. Mukyala Ruth Ag. DD Qualification Standards Dept. DIT



**4.7 Reference time:**

The Assessment and Training Package was compiled in January, 2022 and may be periodically revised to match the dynamic trends in the occupation and hence issued in different versions.

**REFERENCES BOOKS**

- Post-harvest operation by D.Mejfia
- Maize Hybrid Seed Production Manual May 2014 by John F MacRobert, Peter setimela, James Geth and Worku Regesa
- Maize extension manual for extension workers in Uganda by ministry of agriculture animal industry and fisheries
- Ssekawa-Global 2000,1016. Good agronomic and Post-Handling Practices for maize
- Ssekawa-Global 2000.Crop Production Hand book
- MAAIF2016.The maize hand book for extension workers
- Guide for the Dissemination of EAC Maize