



THE REPUBLIC OF UGANDA
Ministry of Education and Sports

Directorate of Industrial Training



**Assessment and Training
Package
For a
CASSAVA AND SWEET
POTATO FARMER**

Qualification Level: 1

Occupational Cluster: Agriculture

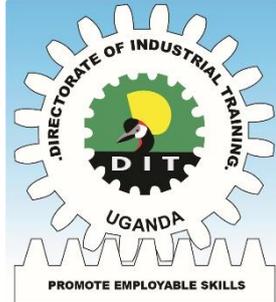
December 2020

Developed by:

**Qualifications Standards Department
Directorate of Industrial Training**

Funded by:

Government of Uganda



Assessment and Training Package

For a

CASSAVA AND SWEET POTATO FARMER

Qualification Level: 1

Occupational Cluster: Agriculture

Directorate of Industrial Training
Plot 97/99 Jinja Road/ Corner 3rd Street,
P.O Box 20050, Lugogo, Kampala, Uganda
Tel: +256 414 253 704; +256 312 279 344
E-mail: uvqf.dit@gmail.com
[Web: www.dituganda.org](http://www.dituganda.org)

© Directorate of Industrial Training
2021

ISBN: 978-9913-626-04-0

ISO: 9001:2015 Certificate No.: UG92580A

All rights reserved. No reproduction or copy transmission of this publication may be made without written permission or in accordance with the provisions of the Copyright, Designs and Patents Act or under the terms of licence permitting limited copying issued by the licencing agency in Uganda. Any person who does any unauthorised act in relation to this publication may be liable to criminal prosecution and civil claims for damages.

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 centres.
- (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.
- (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;

- (a) Define occupational standards in the world of work.
- (b) Define assessment standards.
- (c) Award 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.
- (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 recognised 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) Harmonising 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.
- (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 organises 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.

Table of Contents

Word from Permanent Secretary	iv
Executive Summary	vi
Acknowledgement	viii
Abbreviations and Acronyms	ix
Key Definitions	x
1.0 ATP-PART I	1
Occupational Profile for a Cassava and Sweet Potato Farmer	1
2.0 ATP PART II	8
Training Modules for a Cassava and Sweet Potato Farmer	8
3.0 ATP- PART III	23
Assessment Instruments for a Cassava and Sweet Potato Farmer	23
Written Test Items (Samples)	25
Performance Test Items (Samples)	32
4.0 ATP- PART IV	36
Information on Development Process	36

Word from Permanent Secretary

The Kajubi Report (1989) and the Uganda Government White Paper on Education Review (1992) emphasised that the Uganda Secondary School Education should be vocationalised.

The World Bank Report on education in Uganda 2007 observed that although Uganda was experiencing steady economic growth on one hand, the secondary education curriculum was inadequately addressing the social and economic needs of the country on the other. The Report further noted that it is not the very top academic cadres that contribute most to the growth of the GDP but rather the competent middle level technicians that are flexible and technologically literate that the economy needs in the labour market at all levels.

Correspondingly, the NDP III 2020/21- 2024/5 highlights (i) low labour productivity (ii) high youth unemployment (38%) (iii) low transition rates from training to employment (35%) as some of the key challenges to Human Capital Development in Uganda.

In order to overcome these challenges, NDP III 2020/21- 2024/5, under objective 2 peaks the need to train the learners for the urgently needed skills and mainstream a dual education and training system. This paved way for the development of the lower secondary school vocational curriculum which supports both academic and vocational training.

The afore is in line with the Uganda Vision 2040. Under section 261, it emphasises that learners will be accorded opportunities to excel in the skills areas they are placed into. These will range from sports and cut to technical and vocational training. Hitherto, section 262 clearly states that the entire education system will be changed to emphasise practical skills, attitude and moral values.

Government of Uganda through the Ministry of Education and Sports rolled out the New Lower Secondary Curriculum in secondary schools countrywide during the first term of the academic year 2020. The overall goal of this curriculum is to produce graduates with employable skills and who are competitive in the labour market. It should be emphasised that vocational training will produce graduates who are employable. In the New curriculum, emphasis will be on equipping learners with employable skills and competencies. This will enable learners perform the requisite duties of the specified occupations. This is the reason why the lower secondary school vocational curriculum was tailored to the assessment requirements of the world of work.

Reading from the Curriculum Framework page 12, it is stated that the learners will be assessed by DIT. Upon assessment and certification, the graduates will be employable and competitive in the labour market. It's against this background that DIT, within its mandate vested in the BTVET Act, 2008 comes on board to take the lead in the development of the requisite Assessment and Training Packages (ATPs) for the various occupations that will be assessed under the Lower Secondary Curriculum.

The ATPs 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 and Training Package for training, assessment and certification of a **CASSAVA AND SWEET POTATO FARMER QUALIFICATION LEVEL 1**.

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



Alex Kakooza
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 CASSAVA AND SWEET POTATO FARMER.** This Occupational Profile which was reviewed by Cassava and sweet potato farmers practicing in the world of work mirrors the duties and tasks that Cassava and sweet potato farmers are expected to perform.
- 0.2 **PART II: Training Modules** in the form of guidelines to train Cassava and sweet potato 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 CASSAVA AND SWEET POTATO FARMER. These assessment instruments were reviewed jointly by job practitioners (Cassava and sweet potato farmers) and instructors based on the occupational profile and training modules.
- 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.**
- 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 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 centres as well as companies can accommodate more learners 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).

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

- i Part 1: Occupational Profile: **August 2020**
- ii Part 2: Training Modules: **August 2020**
- iii Part 3: Assessment Instruments (initial bank): **August 2020**

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

DIT takes responsibility of any shortcomings that might be identified in this publication and welcomes suggestions for effectively addressing the inadequacies. The suggestion can be communicated to DIT through P.O. Box 20050, Kampala or through email uvaf.dit@gmail.com.



Patrick Byakatonda
Ag Director

Acknowledgement

The Qualifications Standards Department of DIT acknowledges the valuable contributions to the review of this Assessment and Training Package by the following persons, Institutions and organisations:

- 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 and instructors of Cassava and sweet potato farming from various secondary schools.
- Agriculture Curriculum Specialists from NCDC.
- Examination specialists from UNEB.
- The facilitators involved in guiding the development panels in their activities.
- The Government of Uganda for financing the development of this ATP.

Abbreviations and Acronyms

A&C	Assessment and Certification
ATP	Assessment and Training Packages
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

Assessment	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.
Certification	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.
Competence	Integration of skills, knowledge, attitudes, attributes and expertise in doing/ performing tasks in the world of work to a set standard.
Competency	(Occupational) competence is understood as the ability to perform tasks common to an occupation at an acceptable level.
CBET	Competence-Based Education and Training means that programmes: <ol style="list-style-type: none">1. have content directly related to work2. focus is on 'doing something well'3. assessment is based upon industry work standards, and4. curricula are developed in modular form
Duty	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).
Learning-Working Assignment (LWA)	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.
Modules	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.
Occupational Profile (OP)	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. (*Also see: Duty*)

1.0 ATP-PART I

OCCUPATIONAL PROFILE FOR A CASSAVA AND SWEET POTATO FARMER

- 1.1 The OCCUPATIONAL PROFILE (OP) for “cassava and sweet potato farmer” below defines the **Duties** and **Tasks** a competent Cassava and Sweet Potato 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.”¹

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 developing this Occupational Profile for a CASSAVA AND SWEET POTATO FARMER are listed on the following page.

¹ *The DACUM-method was used. DACUM is an acronym for ‘Develop A Curriculum’*

Job Expert Panel

Twesiga Sosimu

Farm Uganda

Nantakyala Wilbrod

Kidera S.S.S(UNEB examiner)

Maditrwoth Cosma

St Lawrence S.S(Agriculture Teacher)

Apio Hellen B

National Crop Resources Research
Institute

Okello Geoffrey

Wampeewo Ntake S.S(UNEB Examiner)

Namukobe k Mercy

Tendo Farm

Nampuuma Margaret

Mbuye Farm

Wankya Thomas

Muterere S S (Teacher)

Akutu Augustine

Farm Amuria

Adikin Mary

Sere Mixed Farm (Teacher)

Mulindwa Godfrey

NCDC

Co-ordinator

Mukyaala Ruth Elizabeth

Directorate of Industrial Training

Facilitators

Ocho Richard

Directorate of industrial Training

Nyakamadi Janet

Directorate of Industrial Training

Nakibuuka Flavia

Directorate of Industrial Training

Matende Shamsi

Directorate of Industrial Training

Mutebi Ronald

Directorate Of industrial Training

Bakobye Proscovia

Directorate Of industrial Training

Funded by

The Government of Uganda



THE REPUBLIC OF UGANDA
Ministry of Education and Sports

Directorate of Industrial Training

Occupational Profile

For a

"CASSAVA AND SWEET POTATO FARMER"

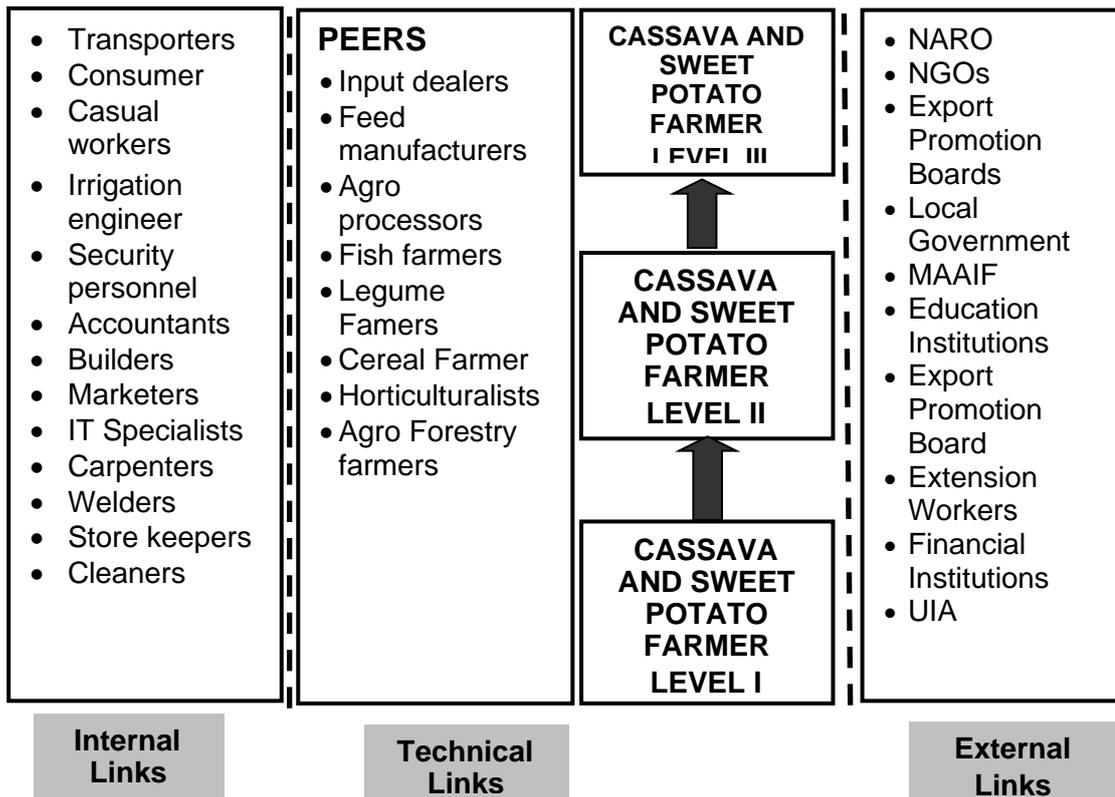
Developed by: (Qualifications Standards)
Directorate of Industrial Training

Dates of workshop: 31st August - 4th
September 2020

NOMENCLATURE FOR THE OCCUPATION OF CASSAVA AND SWEET POTATO FARMER

Definition: A **CASSAVA AND SWEET POTATO FARMER** is one who grows Cassava and Sweet potatoes for Commercial Purposes.

JOB ORGANISATION CHART FOR A CASSAVA AND SWEET POTATO FARMER



Descriptions for the levels in the occupation of 'CASSAVA AND SWEET POTATO Farmer'

UVQ Level I Cassava and Sweet Potato Farmer; is one who grows cassava and sweet potatoes using basic agronomic practices for commercial purposes.

A Level II Cassava and Sweet Potato Farmer: Is a person who grows cassava and potatoes using moderate agronomic practices for commercial purposes.

A Level III Cassava and Sweet Potato Farmer: Is a person who grows and breeds a variety of cassava and potatoes species using advanced agronomic technology for commercial purposes.

DUTIES AND TASKS

A. PLAN CASSAVA AND SWEET POTATO GROWING	A1 Carry out feasibility study	A2 Prepare work plan	A3 Make Financial plan
	A4 Determine factor in puts	A5 Design farm layout	A6 Identify cassava and sweet potato variety
	A7 Identify tools, equipment, materials and implements		

B. ESTABLISH CASSAVA AND SWEET POTATO GARDEN	B1 Clear land	B2 Cultivate land	B3 Demarcate land
	B4 Assess quality of planting material	B5 Determine spacing	B6 Make holes
	B7 Make mounds	B8 Make ridges	B9 Plant cuttings
	B10 Fence Garden		

C. MANAGE GARDEN	C1 Weed garden	C2 Apply fertilisers	C3 Control pests and diseases
	C4 Earth up plant	C5 Prune cassava and sweet potato	C6 Irrigate garden

D. PERFORM HARVESTING AND POST HARVESTING HANDLING OF CASSAVA AND SWEET POTATO	D1 Determine harvest method	D2 Prepare harvest tools and equipment	D3 Identify ready cassava and sweet potato produce
	D4 Harvest cassava and sweet potato produce	D5 Clean cassava and sweet potato produce	D6 Sort cassava and sweet potato produce
	D7 Pack cassava and sweet potato produce	D8 Transport cassava and sweet potato produce	D9 Preserve cassava and sweet potato produce
	D10 Store cassava and sweet potato		

E. MARKET PRODUCE	E1 Carry out market research	E2 Determine the price	E3 Brand produce
	E4 Standardise products	E5 Package products	E6 Weigh produce
	E7 Label produce	E8 Advertise produce	E9 Sell produce
	E10 Communicate with clients		

F. PERFORM OCCUPATIONAL HEALTH, SAFETY AND ENVIRONMENTAL PROTECTIVE PRACTICES	F1 Sensitise workers on health and safety issues	F2 Wear personnel protective gear	F3 Observe occupational health safety and environmental protection practices
	F4 Manage waste	F5 Disinfect tools and equipment	F6 Administer first aid
	F7 Maintain personal hygiene and sanitation	F8 Observe Bio security measures	F9 Practice firefighting
	F10 Display safety signs		

G. PERFORM ADMINISTRATIVE TASKS	G1 Procure material	G2 Recruit workers	G3 Train workers
	G4 Supervise workers	G5 Remunerate workers	G6 Insure business
	G7 Pay bills	G8 Keep records	G9 Organise meetings
	G10 Guide and counsel workers	G11 Motivate workers	G12 Bench mark
	G13 Formalise Business	G14 Manage risks	G15 Pursue Continuous professional development
	G16 Network with stake holders		

Additional Information

Generic Knowledge and skills

- | | |
|--|--|
| 1. Site selection | 25. irrigation skills |
| 2. Soil fertility | 26. Mulching |
| 3. Water quality | 27. Agrochemicals and application |
| 4. Land terrain | 28. Planting skills |
| 5. Dimensions and measurements | 29. Weeding methods |
| 6. Fertilisers and applications | 30. Pruning |
| 7. Sterilisation | 31. Sorting and grading |
| 8. Soil and water conservation. | 32. Growth requirement |
| 9. Pests and diseases | 33. Spacing |
| 10. Harvesting techniques | 34. Packing |
| 11. Transportation | 35. Record keeping |
| 12. Cassava and sweet potato varieties | 36. Labeling |
| 13. Waste management | 37. Pricing |
| 14. Knowledge of garden tools | 38. Advertising |
| 15. First aid | 39. Selling skills |
| 16. Sterilising tools | 40. Communication skills |
| 17. Budgeting | 41. Types of fertilisers and their application |
| 18. Making work schedules | 42. Knowledge on pesticides, fungicides |
| 19. Resource mobilisation | 43. Drying cassava chips |
| 20. Propagation skills | 44. Knowledge on herbicides |
| 21. Soil and water conservation | 45. Plant characteristic |
| 22. post-harvest handling methods of produce | 46. Value addition method |
| 23. Agro input requirement | |
| 24. New technology | |

Attitudes/Traits/ Behavior	Future Trends and Concerns	
<ol style="list-style-type: none"> 1. Dedicated 2. Team player 3. Disciplined 4. Enthusiastic 5. Innovative 6. Resourceful 7. A good listener 8. Result oriented 9. Trainable 10. Strategic 11. Researcher 12. SWOT analysis 13. Hardworking 14. Responsible 15. Caring 16. Committed 17. Time manager 18. Skilled 19. Practical 20. Honest 21. Tolerant 22. Active 23. Hardworking 24. Punctual 25. Realistic 26. Social 27. Able to predict 28. Organised 29. Respectful 30. Confident 31. Trust worthy 32. Transparent 33. Knowledgeable 34. Respectful 35. Healthy 36. Focused 37. Cooperative 38. Exemplary 	<ol style="list-style-type: none"> 1. Expansion of market 2. Use of computers 3. Advancing technology 4. Exportation 5. Need for cassava and sweet potato Farmer association 6. Price fluctuation 7. Continuous professional development 8. Agricultural credit finance 9. Taxation 10. Need for technical assistance to the processors 11. Increase in material extraction processes 12. Nutrition 13. Waste management 	<ol style="list-style-type: none"> 14. Competition from other crop producers 15. Product diversification 16. Pest and Diseases out breaks 17. Expensive equipment for production 18. Land degradation 19. Poor road network 20. Low quality planting materials 21. Unreliable power supply 22. Bad debtors 23. Unfavorable government policies 24. Inflation 25. Weather uncertainties 26. Substandard products 27. Inclusion of UNBS standards 28. Counterfeit products on the market

2.0 ATP PART II

TRAINING MODULES FOR A CASSAVA AND SWEET POTATO 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 Cassava and Sweet Potato 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 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 centres, as well as companies can accommodate more learners in a given period of time.
- 2.3 The modules were reviewed jointly by both instructors and job practitioners. They were reviewed 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 CASSAVA AND SWEET POTATO FARMER QUALIFICATION LEVEL 1?

A **CASSAVA AND SWEET POTATO FARMER LEVEL 1** is one who grows cassava and sweet potatoes using basic agronomic practices for commercial purposes.

TRAINING MODULES FOR A CASSAVA AND SWEET POTATO FARMER UVQ LEVEL 1

Code	Module Title	Average duration	
		Contact hours	Weeks
UE/CS/M1.1	Establish Cassava and Sweet Potato Garden	120	03
UE/CS/M1.2	Manage Cassava and Sweet Potato Garden	160	04
UE/CS/M1.3	Manage Harvest and Post-Harvest Handling of Cassava and Sweet Potatoes	80	02
UE/CS/M1.4	Establish Cassava and Sweet Potato Enterprise	40	01
Summary	4 Training Modules	400 hours	10 weeks

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.

Code	UE/CS/M1.
Module title	M1.1: Establish Cassava and Sweet Potato Garden
Related Qualification	Part of Uganda Vocational Qualification (CASSAVA AND SWEET POTATO FARMER UVQ 1)
Qualification Level	1
Module purpose	At the end of this module, a trainee shall be able to successfully set up a sustainable cassava and sweet potato garden.
Learning-Working Assignments (LWAs)	<p>LWA 1/1: Prepare Land</p> <p>LWA 1/2: Prepare Planting Material</p> <p>LWA 1/3: Plant Material</p> <p>LWA 1/4: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> <i>The learning exercises may be repeated until the trainee acquires targeted competence.</i> <i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning assignment</i>
Related Practical Exercises (PEXs)	<p>LWA 1/1: Prepare Land</p> <p>PEX 1.1: Clear land</p> <p>PEX 1.2: Till land</p> <p>PEX 1.3: Demarcate land</p> <p>PEX 1.4: Construct ridges</p> <p>PEX 1.5: Make mounds</p> <p>PEX 1.6: Construct contours</p> <p>PEX 1.7: Dig planting holes</p> <hr/> <p>LWA 1/2: Prepare Planting Materials</p> <p>PEX 2.1: Assess quality</p> <p>PEX 2.2: Prepare cassava cutting</p> <p>PEX 2.3: Prepare sweet potato vines</p> <p>PEX 2.4: Treat planting materials</p> <hr/> <p>LWA 1/3: Plant Materials</p> <p>PEX 3.1: Mark spacing</p> <p>PEX 3.2: Place vines</p> <p>PEX 3.3: Place cuttings</p> <p>PEX 3.4: Cover with top soil</p>

	<p>LWA 1/4: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>PEX 4.1: Wear protective gear PEX 4.2: Clean tools and equipment PEX 4.3: Repair and replace tools PEX 4.4: Store tools PEX 4.5: Administer first aid PEX 4.6: Manage waste PEX 4.7: Fence garden PEX 4.8: Sensitise workers on occupational safety and environmental protection practices PEX 4.9: Observe bio security</p>
Occupational health and safety	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. e.g. wear protective gear
Pre-requisite modules	None
Related knowledge/ theory	<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"> • Soil and water conservation • Crop pests and disease control • Selection and handling of planting materials • Primary and secondary tillage • Growth requirements for cassava and sweet potato • Human resource management • Agro chemical usage and handling • Farm tools and equipment usage • Weed and weed control • Irrigation • Measurement and dimensions • Literacy • Numeracy • Financial literacy • Crop calendar • ICT • OHSE • Knowledge on field agronomical practices • Soil testing and treatment • Knowledge on the geographical aspects of the area. • Importance of growing cassava and sweet potatoes
Average duration of learning	<p>120hours (15 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • 05 days of occupational theory and • 10 days of occupational practice

Suggestions on organisation of learning	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.
Assessment	Assessment to be conducted according to the established regulations by a recognised assessment body using related Practical and written Test Items from Item Bank
Minimum required tools/ equipment/ implements or equivalent	hoes, panga, tape measures, string, disc plough, ox plough, wheelbarrow, knapsack sprayer, knives, buckets, baw saw, axe, ropes, solar system, ridges, harrows
Minimum required materials and consumables or equivalent	gum boots, overall, gloves, face masks, soap, detergent, water, herbicides, growth boosters, fuel, oil and grease, files, pens, sacks, cassava stem cuttings, sweet potato vines.
Special notes	Theory should be integrated into the practical skills training during instruction.

Code	UE/CS/M1.2
Module title	M1.2: Manage Cassava and Sweet Potato Garden
Related Qualification	<u>Part of</u> Uganda Vocational Qualification (CASSAVA AND SWEET POTATO FARMER UVQ 1)
Qualification Level	1
Module purpose	At the end of this module, a trainee shall be able to apply the basic agronomic practices in the field to ensure healthy and productive growth of cassava and sweet potatoes.
Learning-Working Assignments (LWAs)	<p>LWA 2/1: Weed Garden</p> <p>LWA 2/2: Control Pests and Diseases</p> <p>LWA 2/3: Apply Fertilisers</p> <p>LWA 2/4: Conserve Soil and Water</p> <p>LWA 2/5: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>Note: <i>The learning exercises may be repeated until the trainee acquires targeted competence. The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning assignment.</i></p>
Related Practical Exercises (PEXs)	<p>LWA 2/1: Weed Garden</p> <p>PEX 1.1: Scout garden</p> <p>PEX 1.2: Spray weed</p> <p>PEX 1.3: Dig out weed</p> <p>PEX 1.4: Slash Weed</p> <p>PEX 1.5: Uproot weed</p> <hr/> <p>LWA 2/2: Control Pests and Diseases</p> <p>PEX 2.1: Scout for pest and diseases</p> <p>PEX 2.2: Spray pests</p> <p>PEX 2.3: Rogue plant</p> <p>PEX 2.4: Prune cassava and sweet potatoes</p> <p>PEX 2.5: Spray diseases</p> <hr/> <p>LWA 2/3: Conserve Soil and Water</p> <p>PEX 3.1: Plant wind breaks</p> <p>PEX 3.2: Mulch garden</p> <p>PEX 3.3: Dig trenches</p> <p>PEX 3.4: Plant cover crop</p> <p>PEX 3.5: Construct terraces</p> <p>PEX 3.6: Make contours</p> <p>PEX 3.7: Earth up plant</p>

	<p>LWA 2/4 : Perform Occupational Health Safety and Environmental Practices</p> <p>PEX 4.1: Wear protective gear PEX 4.2: Clean tools and equipment PEX 4.3: Repair and replace tools PEX 4.4: Store Tools PEX 4.5: Administer first aid PEX 4.6: Display safety signs PEX 4.7: Fence garden PEX 4.8: Sensitise workers occupational health, safety and environmental protection practices PEX 4.9: Manage waste PEX 4.10: Observe bio security regulations PEX 4.11: Perform fire fighting</p>
Occupational health and safety	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
Pre-requisite modules	None
Related knowledge/ theory	<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"> • Soil conservation and measures • Fertiliser types and application • Cassava and potato diseases and their management • Weeds and their control methods • Plant spacing • Measurements and dimensions • Farm tools and equipment • Farm records • Budgeting • Literacy and numeracy • Agro chemicals and their application • Field sanitation techniques • First aid administration
Average duration of learning	<p>160 hours (20days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • 05 days of occupational theory and • 15 days of occupational practice
Suggestions on organisation of learning	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.

Assessment	Assessment to be conducted according to the established regulations by a recognised assessment body using related practical and written test items from item bank
Minimum required tools/ equipment/ implements or equivalent	panga, knives, hoes, wheelbarrows, measuring cylinder, bucket, jerrycans basins, water source, knapsack sprayer, fire extinguisher.
Minimum required materials and consumables or equivalent	gloves, water, pesticides, fungicides, oil and grease, overalls, gumboots, face masks, gloves, soap, detergents .
Special notes	

Code	UE/CS/M1.3
Module title	M1.3: Perform Harvesting and Post-Harvest Handling of Cassava and Sweet Potato
Related Qualification	<u>Part of</u> Uganda Vocational Qualification (CASSAVA AND SWEET POTATO FARMER UVQ 1)
Qualification Level	1
Module purpose	At the end of this module, a trainee shall be able to harvest quality cassava and sweet potato and safely handle the produce.
Learning-Working Assignments (LWAs)	<p>LWA 3/1: Prepare Harvest Tools and Equipment LWA 3/2: Prepare Handling and Storage Facilities LWA 3/3: Harvest Cassava and Sweet Potato Tubers LWA 3/4: Preserve Cassava and Sweet Potato Tubers LWA 3/5: Perform Occupational Health Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> <i>The learning exercises may be repeated until the trainee acquires targeted competence.</i> <i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning assignment</i>
Related Practical Exercises (PEXs)	<p>LWA 3/1: Prepare Harvest Tools and Equipment PEX 1.1: Assemble tools and equipment PEX 1.2: Repair tools PEX 1.3: Sharpen tools PEX 1.4: Lubricate movable parts</p> <p>LWA 3/2: Prepare Handling and Storage Facilities PEX 2.1: Prepare washing utensils PEX 2.2: Prepare shredder PEX 2.3: Prepare drying area PEX 2.4: Clean storage facility PEX 2.5: Disinfect storage facility PEX 2.6: Prepare pallets PEX 2.7: Prepare packaging and stitching material</p> <p>LWA 3/3: Harvest Cassava and Sweet Potato Tubers PEX 3.1: Dig out tubers PEX 3.2: Pre-sort tubers PEX 3.3: Collect tubers PEX 3.4: Bag tubers PEX 3.5: Transport tubers</p>

	<p>LWA 3/4: Preserve Cassava and Sweet Potato Tubers PEX 4.1: Sort damage free cassava and potato tubers PEX 4.2: Wash cassava and sweet potato tubers PEX 4.3: Peel cassava and sweet potato tubers PEX 4.4: Shred cassava and sweet potato tubers PEX 4.5: Dry cassava and sweet potato chips PEX 4.6: Test moisture content PEX 4.7: Pack the chips PEX 4.8: Wax cassava and sweet potato tubers PEX 4.9: Pack cassava and sweet potato tubers PEX 4.10: Store cassava and sweet potato tubers</p> <p>LWA 3/5: Perform Occupational Health, Safety and Environmental Protection Practices PEX 5.1: Wear protective gear PEX 5.2: Administer first aid PEX 5.3: Manage waste PEX 5.4: Observe personal hygiene and sanitation PEX 5.5: Clean tools PEX 5.6: Develop SOP PEX 5.7: Display safety signs PEX 5.9: Carry out firefighting PEX 5.10: Observe bio security measures PEX 5.11: Observe OHSE rules and regulations</p>
<p>Occupational Health and Safety</p>	<p>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</p>
<p>Pre-Requisite Modules</p>	<p>None</p>
<p>Related Knowledge/ Theory</p>	<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"> • Tool usage and maintenance • Stitching • Proper handling of tools • Administer first aid • Food handling and preservation • Storage conditions
<p>Average Duration of Learning</p>	<p>80 hours (10 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • 03 day of occupational theory and • 07days of occupational practice

Suggestions On Organisation of Learning	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.
Assessment	Assessment to be conducted according to the established regulations by a recognised assessment body using related practical and written test items from item bank
Minimum Required Tools/ Equipment/ Implements or Equivalent	harvest containers, knives, hoes, pangas, slashers, files, shredders, wheelbarrows, sampling spears, weighing scales, stitching machines, up rooters, bicycles, motorcycle, trucks,
Minimum Required Materials and Consumables or Equivalent	water, buckets, jerrycans, baskets, basins, drums, bags, gloves, gum boots, face masks, overalls, helmets, bandages, ropes, sacks, oil and grease, tarpaulins, stationery.
Special Notes	

Code	UE/CS/M1.4
Module title	M1.4: Establish Cassava and Sweet Potato Enterprise
Related Qualification	<u>Part of</u> Uganda Vocational Qualification (Cassava and sweet potato farmer UVQ 1)
Qualification Level	1
Module purpose	At the end of this module, a trainee shall be able to profitably manage cassava and sweet potato enterprise
Learning-Working Assignments (LWAs)	<p>LWA 4/1: Plan a Cassava and Sweet Potato Farming Enterprise</p> <p>LWA 4/2: Market Produce</p> <p>LWA 4/3: Perform Administrative Task</p> <p>LWA 4/4: Perform Occupational Health Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> <i>The learning exercises may be repeated until the trainee acquires targeted competence.</i> <i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning assignment</i>
Related Practical Exercises (PEXs)	<p>LWA 4/1: Plan a Cassava and Sweet Potato Farming Enterprise</p> <p>PEX 1.1: Conduct a feasibility study</p> <p>PEX 1.2: Select farm site</p> <p>PEX 1.3: Determine a root crop variety</p> <p>PEX 1.4: Source for farm inputs</p> <p>PEX 1.5: Identify labour requirements</p> <p>PEX 1.6: Determine production methods</p> <p>PEX 1.7: Develop site structural plan</p> <p>PEX 1.8: Prepare financial plan</p> <p>PEX 1.9: Prepare budget</p> <p>PEX 1.10: Prepare procurement plan</p> <p>LWA 4/2: Market Produce</p> <p>PEX 2.1: Brand produce</p> <p>PEX 2.2: Package produce</p> <p>PEX 2.3: Label produce</p> <p>PEX 2.4: Price produce</p> <p>PEX 2.5: Promote produce</p> <p>PEX 2.6: Distribute produce</p> <p>PEX 2.7: Sell produce</p> <p>PEX 2.8: Communicate with clients</p>

	<p>LWA 4/3: Perform Basic Administrative Tasks</p> <p>PEX 3.1: Manage finances PEX 3.2: Manage human resources PEX 3.3: Pay bills PEX 3.4: Formalise business PEX 3.5: Generate records PEX 3.6: Conduct meetings PEX 3.7: Network with stakeholders PEX 3.8: Pursue continuous professional development PEX 3.9: Comply with regulations and policies</p> <hr/> <p>LWA 4/4: Perform Occupational Health Safety and Environmental Protection Practices</p> <p>PEX 4.1: Administer first aid PEX 4.2: Train other workers on health and safety issues PEX 4.3: Wear protective gear PEX 4.4: Observe health and safety regulations PEX 4.5: Manage waste PEX 4.6: Store tools and equipment PEX 4.7: Maintain hygiene and sanitation PEX 4.8: Practice firefighting PEX 4.9: Sensitise workers on occupational hazards PEX 4.10: Fence garden PEX 4.11: Observe Bio security</p>
<p>Occupational Health and Safety</p>	<p>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</p>
<p>Pre-Requisite Modules</p>	<p>None</p>
<p>Related Knowledge/ Theory</p>	<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"> • Cost benefit analysis • Advertising • Transport • Sales promotion • Pricing products • Keeping records • Financial literacy • Sealing bags • Test product • Weigh product • Measurement • Cassava and sweet potato variety selection • Market opportunities and trends

Average Duration of Learning	40 hours (5days) of nominal learning suggested to include: <ul style="list-style-type: none"> • 1 day of occupational theory and • 4 days of occupational practice
Suggestions on Organisation of Learning	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.
Assessment	Assessment to be conducted according to the established regulations by a recognised assessment body using related practical and written test items from item bank
Minimum Required Tools/ Equipment/ Implements or Equivalent	computers, tractors, transport means, stitching machines, stitching needles, sampling spear, weighing scale, trolley, drying racks, mobile phone
Minimum Required Materials and Consumables or Equivalent	water, buckets, jerrycans, drums, bags, gloves, gum boots, face masks, books, pens, markers, pallets, threads, ropes, branding materials
Special Notes	

3.0 ATP- PART III

ASSESSMENT INSTRUMENTS FOR A CASSAVA AND SWEET POTATO 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 CASSAVA AND SWEET POTATO FARMER are included.

3.9 Overview of test item samples included:

No	Type of test item	Number 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 effect	1
5.	Written(theory)-matching with work-sequence	2
6.	Performance (Practical) test items	1
TOTAL		09

WRITTEN TEST ITEMS (SAMPLES)

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 1			
Occupational Title:	Cassava and Sweet Potato 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:	September 2020			
Related model:	M 4			
Time allocation:	4 Minutes			

Test Item	What are the benefits of a cassava and sweet potato enterprise to the economy?
Answer spaces	(i) (ii) (iii) (iv)
Expected key (answers)	(i) Produce cassava and sweet potato food (ii) Produce cassava and sweet potato raw materials (iii) Generate Income to improve livelihood (iv) Provide research opportunities (v) Create employment opportunities

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 2			
Occupational Title:	Cassava and Sweet Potato Farmer			
Competence level:	1			
Code no.				
Test Item type:	Short answer	√		
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
Complexity level:	C1			
Date of OP:	September 2020			
Related model:	M2			
Time allocation:	4 minutes			

Test Item	State four ways of clearing land for a cassava and sweet potato garden.		
Answer spaces	(i)	
	(ii)	
	(iii)	
	(iv)	
Expected key (answers)	(i)	Slashing.	
	(ii)	Controlled Burning	
	(iii)	Drainage	
	(iv)	Uprooting tree stumps	
	(v)	Spraying	
	(vi)	Deforestation	

DIT/ QS		Test Item Database Written (Theory) Test Item- no. 3			
Occupational Title:	Cassava and Sweet Potato Farmer				
Competence level:	1				
Code no.					
Test Item type:	Short answer				
	Multiple choice	√			
	Matching item	Generic	Cause-Effect	Work-sequence	
Complexity level:	C2				
Date of OP:	September 2020				
Related model:	M 3				
Time allocation:	2 minutes				

Test Item	Why is it important to preserve tubers?
Distracters and correct answer	A. To make it taste better B. To increase sales C. To increase their shelf life D. To package them better

Key (answer)	C
--------------	---

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 4			
Occupational Title:	Cassava and Sweet Potato Farmer			
Competence level:	1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic	Cause-Effect	Work-sequence
		√		
Complexity level:	C1			
Date of OP:	September 2020			
Related model:	M 1.4			
Time allocation:	3 minutes			

Test Item	Match the following agronomical practices to their appropriate method of implementation.
------------------	--

Column (A)[Practices]	
A	Make a nursery bed
B	Control pests
C	Harden off
D	Pricking out

Column (B)[Methods]	
1	Pruning
2	Spraying
3	Root trimming
4	Pulverising soil
5	Removal of shade
6	Uprooting extra seedlings
7	Fertiliser application

Key (answer)	A-4, B-2, C-5, D-6
---------------------	--------------------

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 5			
Occupational Title:	Cassava and Sweet Potato 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:	September 2020			
Related model:	M 2			
Time allocation:	2 Minutes			

Test Item	Match the following agro-chemicals to their application in cassava and sweet potato production.
------------------	---

Column (A) (Growth impairment)	
1	Herbicides
2	NPK
3	Fungicide
4	Pesticide

Column (B) (Causes)	
A	Soil
B	Pests
C	Crops
D	Store
E	Diseases
F	Water
G	Weeds

Key (answer)	1.G, 2.A, 3.E, 4.B
---------------------	--------------------

DIT/ QS		Test Item Database Written (Theory) Test Item- no. 6			
Occupational Title:	Cassava and Sweet Potato Farmer				
Competence level:	1				
Code no.					
Test Item type:	Short answer				
	Multiple choice				
	Matching item	Generic	Cause-Effect	Work-sequence	
				√	
Complexity level:	C2				
Date of OP:	September 2020				
Related model:	M.1				
Time allocation:	2 Minutes				

Test Item	State the procedure followed when establishing a cassava and sweet potato garden in their chronological order.
------------------	--

Column A (chronology)	Column B (work steps) wrong chronology	
1 st	A	Prepare planting materials
2 nd	B	Plant planting materials
3 rd	C	Prepare land
4 th	D	Carryout land survey
5 th	E	Perform occupational health and safety and environmental protection practices

Key (answer)	1.D, 2.C, 3.A, 4.B, 5.E
---------------------	-------------------------

DIT/ QS		Test Item Database Written (Theory) Test Item- no. 7			
Occupational Title:	Cassava and Sweet Potato Farmer				
Competence level:	1				
Code no.					
Test Item type:	Short answer				
	Multiple choice				
	Matching item	Generic	Cause-Effect	Work-sequence	
				√	
Complexity level:	C2				
Date of OP:	September 2020				
Related model:	M 2				
Time allocation:	4 Minutes				

Test Item	Re-arrange the following activities carried out in the field when applying inorganic fertilisers in their chronological order
------------------	---

Column A (Order)	Column B (Steps in wrong chronology)	
1 st	A	Apply fertilisers
2 nd	B	Clean tools used
3 rd	C	Prepare the fertiliser
4 th	D	Prepare tools and equipment
5 th	E	Determine the fertilisers
6 th	F	Store tools and equipment

Key (answer)	1.E, 2.D, 3.C, 4.A, 5.B, 6. F
---------------------	-------------------------------

PERFORMANCE TEST ITEMS (samples)

DIT/ QS	Test Item Database Performance Test Item- no. 8
Occupational Title:	Cassava and Sweet Potato Farmer
Competence level:	1
Code no.	
Test Item:	Harvest three cassava plants, check for disease status and transport tubers to the collection center
Complexity level:	P3
Date of OP:	September 2020
Related Module:	M 1.3
Related skills and knowledge:	Harvesting methods, safety of the tuber. Checking for disease status of tuber, tuber handling, transportation of tubers, pests and disease diagnosis
Required tools, materials and equipment:	Hoe, knife, wheelbarrow, panga, basket, sack, ropes), PPE's
Time allocation:	1 Hour
Preferred venue:	Cassava garden
Remarks for candidates	Observe health and safety precautions
Remarks for assessors	Provide all the tools, equipment and materials as listed above. The collection center should be 20 meters from the garden

#	Assessment criteria	Scoring guide	Max. score	
			process	Result
1	Preparation before task	Wore protective gear		1
		- Gumboots		1
		- Overall		1
2	Uprooting tubers	- Gloves		
		Cut stem canopy	2	
		Adequate stem length for uprooting observed		2
		Dig out tubers	4	
		Minimal damage observed on tubers		2

#	Assessment criteria	Scoring guide	Max. score	
			process	Result
		No tubers left underground		2
		Cut tubers from the mother plant	2	
3	Checked diseased tuber	Chopped off attachment end of tuber	2	
		Examined the chopped ends for disease presence	2	
		Presence or absence of disease confirmed		2
4	Transported tubers to collection center	Bagged tubers	2	
		Loaded tubers and tools on wheelbarrow	2	
		Moved wheelbarrow to collection center	2	
		Off loaded tubers and tools	2	
		Weighed tubers	3	
		Recorded yield		2
5	Demobilisation of tools and equipment	Cleaned tools and equipment	2	
		Dirt free tools and equipment observed		2
		Recorded tools and equipment		2
		Stored tools and equipment		1
TOTAL (Y)		Process + Results	25	18
			43	
MAXIMUM SCORE		$\frac{x}{y} \times 100$	$\frac{x}{99} \times 100$	

DIT/ QS	Test Item Database Performance Test Item- no. 09
Occupational Title:	Cassava and sweet potato farmer
Competence level:	1
Code no.	
Test Item:	Prepare 15 kilograms of fresh cassava chips for drying
Complexity level:	P2
Date of OP:	September 2020
Related Module:	M 1.2
Related skills and knowledge:	Peeling, washing, chipping, drying, wear protective gears, food handling, HACCP, tools material handling
Required tools, materials and equipment:	Chippers, food grade containers, jerrycans, knives, drums, tarpaulin, water, weighing scale, gloves, overall, mask and gumboots
Time allocation:	1 Hour
Preferred venue:	Food handling sites
Remarks for candidates	Observe health and safety precautions Observe careful handling of materials Come with gumboots, gloves and nose masks
Remarks for assessors	Avail material, tools and equipment used

#	Assessment criteria	Scoring guide	Max. score	
			process	Result
1	Preparation before task	Wore protective gear <ul style="list-style-type: none"> - Gumboots - Overall - Gloves - Mask 		1 1 1 1
		Assembled tools and equipment <ul style="list-style-type: none"> - Knives - Food grade container - Jerrycan - Water reservoir 		2
		Assembled material <ul style="list-style-type: none"> - Cassava tubers - Tarpaulin - water 		1

#	Assessment criteria	Scoring guide	Max. score	
			process	Result
2	Chip tubers	Washed tubers	2	
		Dirt free tubers observed		2
		Peeled tubers	2	
		Removed damaged parts	2	
		No wastage of tubers observed	2	
		Washed peeled tubers	2	
		Pure white tubers achieved		2
		Removed middle core		2
		Chipped tubers	2	
		Uniform size of chips attained		2
		Chips cut at approximately 3mm to 7mm verified		3
		Chips placed in a food grade container observed		2
3	Demobilisation of tools and materials	Gathered tools, material and equipment		1
		Recorded tools and equipment		1
		Cleaned tools and equipment	2	
		Dirt free tools and equipment observed		1
		Handover tools and equipment		1
TOTAL (Y)			14	18
		Process + Results	32	
MAXIMUM SCORE		$\frac{x}{y} \times 100$	$\frac{x}{99} \times 100$	

4.0 ATP- PART IV

INFORMATION ON DEVELOPMENT PROCESS

4.1 Occupational Profile Development (September 2020)

The Occupational Profile was exclusively developed by job practitioners who were working in the Cassava and Sweet Potato occupation. The job expert panel, guided by UVQF Facilitators defined duties and tasks performed and provided additional generic information regarding the occupation.

4.2 Training Module Development (September 2020)

Based on the Occupational Profile for a Cassava and Sweet Potato Farmer of September 2020, Training Modules were developed by job practitioners, guided by UVQF Facilitators.

4.3 Test Item Development (September 2020)

Based on the Occupational Profile for a Cassava and Sweet potato Farmer of September 2020, and Training Modules, Test Items were developed by combined panels of instructors 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 instructors 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 different stages were constituted by members from the following organisations:

Development panel		
	Name	Institution/ Organisation
1.	Nantakyala Wilbrod	Kidera SS
2.	Maditrwoth Cosmas	St. Lawrence Sonde SS
3.	Mulindwa Godfrey	NCDC Kyambogo
4.	Apio Hellen B	National Crop Resources Research Institute
5.	Twesiga Sosimu	Farm Uganda
6.	Namukobe K Mercy	Tendo farm
7.	Nampuuma Margaret	Mbuye Farm
8.	Wankya Thomas	Muterere SS
9.	Akutu Augustine	Farm Amuria
10.	Okello Geoffrey	UNEB Examiner
11.	Adikin Mary	Sere Mixed Farm(Teacher)
12.	Kakai Susan Kasadhakawo	M.O.E.S

4.6 Quality check panel

No.	Name	Organisation
1.	Sendikaddiwa James Kajubi	NCDC
2.	Aryatuha Ronnet	DIT
3.	Ssentongo Simon Peter	DIT
4.	Sempala Patrick	MoES
5.	Mugabe Brian	DIT

4.7 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 (Occupational Profile Development):**
 - Mr. Ochwo Richard QO, DIT
 - Ms. Nyakamadi Janet
 - Mr. Matende Shamsi
3. **Facilitators (Training Modules Development):**
 - Mr. Ochwo Richard QO, DIT
 - Ms. Nyakamadi Janet
 - Mr. Matende Shamsi
4. **Facilitators (Test Item Development):**
 - Mr. Ochwo Richard
 - Ms. Nyakamadi Janet
 - Mr. Matende Shamsi
5. **Quality check facilitator:** Mrs. Asimwe Moreen
6. **Compiled by:** Mr. Mutebi Ronald
 - Ms. Nakibuka Flavia
 - Ms Bakoby Proscovia K, Data Entrants DIT
 - Atai Sarah QS DIT,
 - Ninsiima Isabella QS DIT
7. **Edited by:** Ms. Mukyala Ruth Ag. DD QS Dept. DIT
8. **Coordinated by:** Mr. Byakatonda Patrick, Ag. Director, DIT;

4.6 Reference time:

The Assessment and Training Package was developed in September 2020 and may be periodically revised to match the dynamic trends in the occupation and hence issued in different versions.

References:

1. Adekunle A A, Dixon A, Ojurongbe J, Liona P, Muthada L, Adisa S. 2004 Growing Cassava Commercially in Nigeria. USAID, ICS-Nigeria and IITA
2. Epperson JE, Pachio DH, Guevara CL. 1996. The cost of maintaining genetic resources of cassava, *Manihot esculenta* Crantz
3. Devries J, Toenniessen G. 2001. Securing the harvest: biotechnology, breeding, and seed systems for African crops. CABI Publishing, New York. 208 pp.
4. Ceballos H. 2006. Cassava research at CIAT (poster). centro internacional de Agricultural Tropical (poster), Cali, Colombia.
5. Tewe oo. 2004. cassava for livestock feed in sub-saharan Africa. FAO/IFAD, Rome



ISBN 978-9913-626-04-0



9 789913 626040
