



THE REPUBLIC OF UGANDA
Ministry of Education and Sports

Directorate of Industrial Training



**Assessment and Training
Package**

For a

VEGETABLE FARMER

Qualification Level: 1

Occupational Cluster: Agriculture

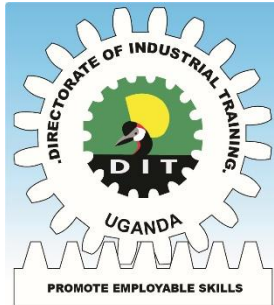
August 2020

Reviewed by:

Directorate of Industrial Training
Qualifications Standards Department

Funded by:

Government of Uganda



Assessment and Training Package

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VEGETABLE FARMER

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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)

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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 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.

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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 **VEGETABLE FARMER QUALIFICATION LEVEL I**.

Finally, I thank all individuals, organisations and development partners who have contributed and/or participated in the development 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 Vegetable Farmer.** This Occupational Profile which was reviewed by Vegetable farmers practicing in the world of work mirrors the duties and tasks that Vegetable farmers are expected to perform.
- 0.2 **PART II: Training Modules** in the form of guidelines to train Vegetable 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 VEGETABLE FARMER. These assessment instruments were reviewed jointly by job practitioners (Vegetable 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 uyaf.dit@gmail.com.



Patrick Byakatonda
Ag. Director

Acknowledgement

The Qualifications Standards Department of DIT acknowledges the valuable contributions to the development 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
- 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
FAO	Food and Agricultural Organisations
ITC	Industrial Training Council
GoU	Government of Uganda
LWA	Learning-Working Assignment
MC	Modular Curriculum
MAAF	Ministry of Agriculture, Animal Industry and Fisheries
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
URA	Uganda Revenue Authority
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)	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/assignments.
Modules	Modules are part(s) of a whole 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	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 reward for demonstrating competence, based on formal assessment against set standards and provided to the individual in the form of a certificate specifying the nature of the competence.

Tasks

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 VEGETABLE FARMER

- 1.1 The OCCUPATIONAL PROFILE (OP) for “a Vegetable Farmer” below defines the **Duties** and **Tasks** a competent Vegetable 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.

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 are listed on the following page.

The DACUM-method was used. DACUM is an acronym for Develop a Curriculum

Job Expert Panel

Osire John
UNEB Examiner

Isooba James
Iganga S.S(UNEB Examiner)

Mulumba Mutema
NCDC

Okiror Akol Charles.
Abilonino IC

Aringaniza Ingrid
21st Century Sustainability Options Ltd

Proscovia Nakirya
Uromcamu
Acer Land Agro-Based
Enterprises

Byaruhanga Benson
Benjoh Trusted Co. Ltd

Tukwasibwe William
Global Agro-Enterprises Ltd

Hellen Machika
Feed All (U) Ltd

Beeyo Moses Bernard
Jinja SS (UNEB Examiner)

Bukenya Bonny
Bombo Army Secondary School

Oryem Raphael
Retired Lecturer-Gulu University

Co-ordinator
Mukyala Ruth. E
Directorate of Industrial Training

Facilitators
Komugisha Noeline
Directorate of Industrial Training

Lovance kyarizi
Directorate of Industrial Training

Funded by
Government of Uganda



THE REPUBLIC OF UGANDA
Ministry of Education and Sports

Directorate of Industrial Training

Occupational Profile
For a
"Vegetable Farmer"

Developed by: Qualifications Standards
Department of the Directorate of
Industrial Training

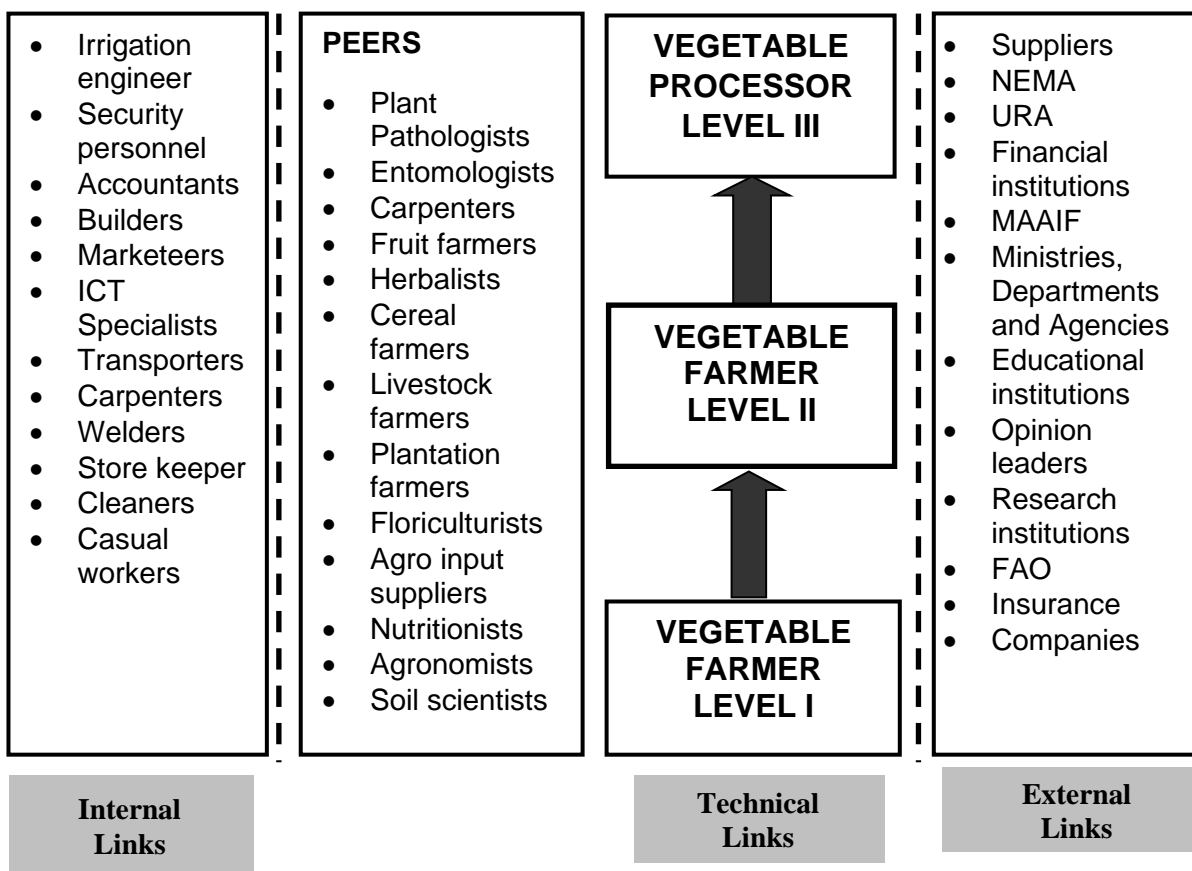
Dates of workshop: 10th -14th August 2020

NOMENCLATURE FOR THE OCCUPATION OF VEGETABLE FARMER

Definition:

A Vegetable Farmer Is a person who sustainably produces vegetables using recommended agronomic practices for home consumption and commercial purposes.

JOB ORGANISATION CHART FOR A VEGETABLE FARMER



UVQF Level I: Is an individual who establishes open field vegetables garden using basic agronomic practices to produce vegetables.

UVQF level II: Is an individual who establishes and manages vegetable garden under controlled conditions for the market.

UVQF Level III: Is an individual who produces vegetables using advanced technology and breeds seed for vegetable multiplication.

Duties and Tasks

A. PLAN FOR VEGETABLE GROWING	A1 Conduct market survey	A2 Determine vegetable type	A3 Determine labour requirements
	A4 Select production method	A5 Select site	A6 Prepare budgets
	A7 Prepare work schedules	A8 Prepare procurement plan for tools, equipment and materials	A9 Make provision for record keeping

B. SET UP A NURSERY BED	B1 Prepare land	B2 Prepare nursery bed	B3 Prepare soils/ growth Media
	B4 Prepare propagation materials	B5 Plant propagation material	B6 Prick out seedlings
	B7 Water the bed	B8 Erect nursery shade	B9 Control pests and diseases
	B10 Harden seedlings		

C. ESTABLISH VEGETABLE GARDEN	C1 Clear site	C2 Till garden	C3 Demarcate garden
	C4 Apply fertiliser	C5 Construct drainage structures	C6 Dig planting holes
	C7 Transplant seedlings	C8 Shade seedlings	C9 Mulch garden
	C10 Water garden	C11 Construct vegetable support structures	C12 Label vegetable garden
	C13 Fence garden		

D. MAINTAIN VEGETABLE GARDEN	D1 Thin vegetables	D2 Carry out gap filling	D3 Weed garden
	D4 Control pests and diseases	D5 Conserve moisture	D6 Prune vegetables
	D7 Stake vegetable	D8 Repair vegetable support structures	D9 Train vegetables

E. PERFORM HARVEST AND POST HARVEST HANDLING OF VEGETABLES	E1 Identify ready vegetables	E2 Determine harvesting time	E3 Determine harvesting method
	E4 Prepare harvesting tools and Containers	E5 Pick vegetables	E6 Transport vegetables
	E7 Sort vegetables	E8 Grade vegetables	E9 Clean vegetables
	E10 Preserve vegetables	E11 Store vegetables	

F. MARKET VEGETABLES	F1 Survey market	F2 Package vegetables	F3 Brand vegetables
	F4 Label produce	F5 Price vegetables	F6 Advertise vegetables
	F7 Sell produce		

G. PERFORM OCCUPATIONAL HEALTH, SAFETY AND ENVIRONMENTAL PROTECTION PRACTICES	G1 Administer first aid	G2 Sensitise co-workers on key health issues	G3 Observe bio safety measures
	G4 Observe OHSE rules and regulations	G5 Manage waste	G6 Display safety signs
	G7 Perform fire fighting	G8 Wear personal protective gear	G9 Maintain hygiene and sanitation

H. PERFORM ADMINISTRATIVE TASKS	H1 Manage human resources	H2 Manage finances	H3 Attend meetings
	H4 Keep records	H5 Procure farm inputs	H6 Network with other stakeholders
	H7 Upgrade skills	H8 Register business	H9 Insure business
	H10 Visit model farms		

Additional Information

Generic Knowledge & Skills

1. Qualities of a good site
2. Soil fertility
3. Quality water
4. Land terrain
5. Dimensions and measurements
6. Fertilizers and applications
7. Soil sterilisation techniques
8. Potting skills
9. Staking
10. Harvesting methods
11. Transportation of vegetables
12. Financial management
13. Knowledge of garden tools
14. Tools and equipment maintenance
15. Budgeting
16. Making work schedules
17. Resource mobilisation
18. OHSE practices
19. Skills of propagation
20. Sowing seeds
21. Skills of making shades
22. Skill of watering
23. Mulching
24. Spraying
25. Agro-chemicals handling and application
26. Skills of planting and transplanting
27. Weeding methods
28. Thinning
29. Pruning
30. Sorting and grading
31. Vegetable preservation
32. Packaging
33. Record keeping
34. Labelling
35. Pricing
36. Advertising
37. Skills of selling
38. Communication skills

Tools, equipment and materials

- | | | |
|---------------------------------|-----------------------|-----------------------|
| 1. Hand hoes | 31. Cement | 60. Tape measures |
| 2. Spade | 32. Timber | 61. Hormones |
| 3. Slashers | 33. Stones | 62. Syringes |
| 4. Wheel barrows | 34. Sand | 63. Fumigants |
| 5. Trowels | 35. Paint | 64. Buckets |
| 6. Potting bags | 36. Saw dust | 65. Jerrycans |
| 7. Rake | 37. Black soil | 66. Pack house crates |
| 8. Watering can | 38. Brush | 67. Pallets |
| 9. Fiber net | 39. Knife | 68. Sorting tables |
| 10. Secateurs | 40. Forked hoes | 69. Weighing scales |
| 11. Polythene sheet | 41. Ploughs | 70. Stationery |
| 12. Poles (wooden and metallic) | 42. Washroom | 71. Thermometers |
| 13. Hand saws | 43. Mother garden | 72. First aid kit |
| 14. Hammers | 44. Sign posts | 73. Water |
| 15. Nails | 45. Bill boards | 74. Waste pits |
| 16. Fibre mats | 46. Tractors | 75. Soak pits |
| 17. Gumboots | 47. Bulls | 76. Plastic crates |
| 18. Spikes (for labelling) | 48. Disc harrow | 77. Tarpaulin |
| 19. Hand gloves | 49. Seeds/seedlings | 78. Notice board |
| 20. Knap sack sprayer | 50. Field crates | 79. Detergents |
| 21. Masks | 51. Sacks | 80. Mobile phones |
| 22. Overalls | 52. Planters | 81. Computer |
| 23. Axe | 53. Herbicides | 82. Radio |
| 24. Wires | 54. Pesticides | 83. Television |
| 25. Ropes | 55. Fertilisers | 84. Brochures |
| 26. Mulches | 56. Fungicides | 85. Stores |
| 27. Pegs | 57. Transport means | |
| 28. Shades | 58. Chain/barbed wire | |
| 29. Iron sheets | 59. Water reservoir | |
| 30. Bricks | | |

Attitudes/Traits/Behaviour	Future Trends and Concerns
<ol style="list-style-type: none">1. Honest and transparent2. Tolerant3. Active4. Hard working5. Punctual6. Realistic7. Social8. Organised9. Respectful10. Confident11. Trustworthy12. Dedicated13. Team player14. Disciplined15. Enthusiastic16. Creative and innovative17. Resourceful18. A good listener19. Result oriented20. Trainable21. Strategic22. Researcher23. Perseverance24. Flexible	<ol style="list-style-type: none">1. Market expansion2. Variety improvement3. Technological advancements i.e. internet, websites, etc.4. Vegetable farmer groups formation5. Price fluctuations6. Need for stores e.g. cold rooms, refrigerated trucks for vegetables produced7. Value addition8. Environmental degradation9. Unreliable rainfall10. Climate change11. Need to visit model farmers12. Limited capital13. Population growth14. High taxation15. Need for specialists to give technical advice to farmers16. Pests and diseases outbreaks17. Land tenure system

2.0 ATP – PART II

Training Modules for a Vegetable 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 Vegetable Farmer occupation 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 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 VEGETABLE FARMER LEVEL 1?

Is an individual who establishes open field vegetable gardens, carries out basic maintenance activities for example weeding, watering, mulching, harvesting and selling of vegetables, etc.

TRAINING MODULES FOR A VEGETABLE FARMER UVQF LEVEL 1

Code	Module Title	Average duration	
		Contact hours	Weeks
UE/VF/M1.1	Establish a Vegetable Nursery Bed	160	4
UE/VF/M1.2	Establish and Maintain a Vegetable Garden	120	3
UE/VF/M1.3	Perform Harvesting and Post-Harvest Handling of Vegetables	160	4
UE/VF/M1.4	Establish a Vegetable Farming Enterprise	160	4
Summary	4 Training Modules	600 hours	15 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 240hours 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/VF/M 1.1
Module title	M 1.1: Establish a Vegetable Nursery Bed
Related Qualification	Part of Uganda Vocational Qualification (Vegetable Farmer UVQ 1)
Qualification Level	1
Module purpose	At the end of this module, a trainee shall be able to manage vegetable seedlings in a nursery bed
Learning-Working Assignments (LWAs)	<p>LWA 1/1: Prepare Nursery Bed LWA 1/2: Prepare Propagation Materials LWA 1/3: Plant Propagation Materials LWA 1/4: Erect the Nursery Bed Shed LWA 1/5: Manage Seedling Bed LWA 1/6: Perform Occupational Health, Safety and Environment Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> 1. The learning exercises may be repeated until the trainee acquires targeted competence. 2. The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning assignment
Related Practical Exercises (PEXs)	<p>LWA 1/1: Prepare a Nursery Bed PEX 1.1: Select the site PEX 1.2: Select tools and equipment PEX 1.3: Clear the site PEX 1.4: Till site PEX 1.5: Raise beds PEX 1.6: Sterilise soil PEX 1.7: Take nursery bed measurements PEX 1.8: Apply fertilisers PEX 1.9: Prepare growth media</p> <p>LWA 1/2: Prepare Propagation Materials PEX 2.1: Carryout germination test on planting materials PEX 2.2: Soak the seeds PEX 2.3: Treat propagation materials PEX 2.4: Sort the planting materials</p>

	<p>LWA1/3: Plant Propagation Materials PEX 3.1: Make drills PEX 3.2: Pot propagation materials PEX 3.3: Insert propagation materials PEX 3.4: Firm growth media PEX 3.5: Apply mulch</p> <p>LWA 1/4: Erect the Nursery Shed PEX 4.1: Cut poles/posts PEX 4.2: Dig the holes PEX 4.3: Fix the poles PEX 4.4: Shade the nursery PEX 4.5: Construct water diversion channels</p> <p>LWA 1.5: Manage Seedlings Bed PEX 5.1: Remove mulch from the bed PEX 5.2: Water the bed PEX 5.3: Scout nursery PEX 5.4: Weed nursery PEX 5.5: Spray nursery PEX 5.6: Prick out seedlings PEX 5.7: Harden seedlings</p> <p>LWA1.6: Perform Occupational Health, Safety and Environment Protection Practices. PEX 6.1: Manage waste PEX 6.2: Wear protective gear PEX 6.3: Handle toxic substances PEX 6.4: Sensitise workers on health issues PEX 6.5: Administer first aid PEX 6.6: Perform firefighting PEX 6.7: Observe bio security measures PEX 6.8: Observe OHSE rules and regulations</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"> • Nursery bed agronomical practices

	<ul style="list-style-type: none"> • Field agronomical practices • Seed testing methods • Sterilisation of growth media • Knowledge on soil and water conservation • Geographical aspects of the area • Knowledge on classification of vegetables • Challenges involved in vegetable growing • Importance of growing vegetables • Nutritional values of vegetables • Vegetable growth requirements • Planting seasons and trends • Types of growth media and their characteristics • Types of vegetable pests and diseases
Average duration of learning	120hours (15 days) of nominal learning suggested to include: <ul style="list-style-type: none"> • <i>5days of occupational theory and</i> • <i>10 days of occupational practice</i>
Suggestions on organisation of learning	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.
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	hand hoes, forked hoes, slashers, pangas, planting lines, tape measure, sickle, watering can, wheelbarrow, dibber, hand trowel, string/fibre, shovel, bucket, hose pipe, spade, hammer, axe, water drum, sieves, knives
Minimum required materials and consumables or equivalent	water, tetrazolium chloride salt, potassium permanganate, fertiliser (inorganic and organic), grass (mulching materials), reeds (thatching materials), pesticides (assorted)
Special notes	

Code	UE/VF/M1.2
Module title	M1.2: Establish and Maintain a Vegetable Garden
Related Qualification	<u>Part of</u> Uganda Vocational Qualification (Vegetable Farmer UVQ 1)
Qualification Level	1
Module purpose	At the end of this module, a trainee shall be able to successfully set up and raise vegetables up to harvesting period
Learning-Working Assignments (LWAs)	<p>LWA 2/1: Prepare a Vegetable Garden LWA 2/2: Transplant Vegetable Seedlings LWA 2/3: Plant seed Propagation Materials LWA 2/4: Manage Vegetable Garden LWA 2/5: Perform Occupational Health Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> 1. The learning exercises may be repeated until the trainee acquires targeted competence. 2. The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning assignment
Related Practical Exercises (PEXs)	<p>LWA 2/1: Prepare a Vegetable Garden PEX 1.1: Select tools and equipment PEX 1.2: Test soils PEX 1.3: Clear site PEX 1.4: Till land PEX 1.5: Apply fertilisers PEX 1.6: Demarcate plots PEX 1.7: Dig contours</p> <p>LWA 2/2: Transplant Vegetable Seedlings PEX 2.1: Water seedlings PEX 2.2: Dig holes PEX 2.3: Scoop seedlings PEX 2.4: Load seedlings PEX 2.5: Transport seedlings PEX 2.6: Off load seedlings PEX 2.7: Plant seedlings PEX 2.8: Shade seedlings</p>

	<p>LWA 2/3: Plant Seed Propagation Materials PEX 3.1: Test seed germinability PEX 3.2: Dig holes PEX 3.3: Plant seed propagation materials PEX 3.4: Water the garden PEX 3.5: Monitor sprouting PEX 3.6: Thin seedlings PEX 3.7: Perform gap filling</p> <p>LWA 2/4: Manage a Vegetable Garden PEX 4.1: Control pests and diseases PEX 4.2: Weed garden PEX 4.3: Mulch vegetable garden PEX 4.4: Water garden PEX 4.5: Perform staking PEX 4.6: Train plants PEX 4.7: Fertilise garden</p> <p>LWA2/6: Perform Occupational Health, Safety and Environment Protection Practises PEX 6.1: Wear protective gear PEX 6.2: Manage waste PEX 6.3: Administer first aid PEX 6.4: Sensitise worker on health and safety measures PEX 6.5: Observe food safety regulations PEX 6.6: Maintain hygiene and sanitation PEX 6.7: Perform 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
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"> • Seed bed preparation • Soil erosion and control • Fertiliser types and application • Plant spacing • Timely planting • Planting materials and their preparation/processing • Soil profile and soil types

	<ul style="list-style-type: none"> • Water quality and techniques of watering • Tools and equipment usage • OHSE practices • Agronomic management practices • Agro chemicals and their application
Average duration of learning	<p>160 hours (20days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • <i>5 days of occupational theory and</i> • <i>15 days of occupational practice</i>
Suggestions on organisation of learning	<p>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.</p>
Assessment	<p>Assessment to be conducted according to the established regulations by a recognised assessment body using related practical and written test items from item bank</p>
Minimum required tools/ equipment/ implements or equivalent	<p>hoe, gumboots, overalls, spray pump, basins, wheelbarrows, strings, watering can, jerrycan, water tank/drums, seed boxes/tray, sieve, tape-measure, buckets, pruning shear, knives, razorblades, hammer, spade, shovel, stools, mattocks, pegs, rulers, secateurs</p>
Minimum required materials and consumables or equivalent	<p>gloves, match boxes, herbicides, water, seeds, palm leaves, papyrus reeds, fertiliser/manure firewood, nails, banana fibres, herbicides</p>
Special notes	

Code	UE/VF/M1.3
Module title	M1.3: Perform Harvesting and Post-Harvest Handling of Vegetables
Related Qualification	Part of Uganda Vocational Qualification (Vegetable Farmer UVQ 1)
Qualification Level	1
Module purpose	At the end of this module, a trainee shall be able to identify ready vegetables, harvest and care for them.
Learning-Working Assignments (LWAs)	<p>LWA 3/1: Harvest Vegetables</p> <p>LWA 3/2: Perform Post-Harvest Handling</p> <p>LWA 3/3: Perform Occupational Health and Safety Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> 1. The learning exercises may be repeated until the trainee acquires targeted competence. 2. The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning assignment
Related Practical exercises (PEXs)	<p>LWA 3/1: Harvest Vegetables</p> <p>PEX 1.1: Prepare harvesting tools, equipment and materials</p> <p>PEX 1.2: Identify vegetables ready for harvest</p> <p>PEX 1.3: Cut/reap/gather/uproot vegetables</p> <p>PEX 1.4: Transport harvested vegetables</p> <p>LWA 3/2: Perform Post-Harvest Handling</p> <p>PEX 2.1: Sort harvested vegetables</p> <p>PEX 2.2: Clean harvested vegetables</p> <p>PEX 2.3: Grade vegetables</p> <p>PEX 2.4: Preserve vegetables</p> <p>PEX 2.5: Store vegetables</p> <p>PEX 2.6: Manage rejects</p> <p>LWA 3/3: Perform occupational Health Safety and Environmental Protection Practices</p> <p>PEX 3.1: Manage waste</p> <p>PEX 3.2: Administer first aid</p> <p>PEX 3.3: Wear protective gear</p> <p>PEX 3.4: Maintain hygiene and sanitation</p> <p>PEX 3.5: Sensitise workers on health issues</p>

	<p>PEX 3.6: Observe bio-security PEX 3.7: Observe OHSE rules and regulations</p>
Occupational Health and Safety	<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>
Pre-Requisite Modules	<p>None</p>
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"> • Maturity indicators of vegetable products • Knowledge of storage of vegetable products • Harvesting tools and equipment usage • Storage of vegetables • Vegetable preservation methods • OHSE practices • Market requirements • Sorting harvested vegetables • Handling vegetable rejects • Cleaning of vegetables
Average Duration of Learning	<p>120 hours (15 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • 5 day of occupational theory and • 10 days of occupational practice
Suggestions On Organisation of Learning	<p>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.</p>
Assessment	<p>Assessment to be conducted according to the established regulations by a recognised assessment body using related practical and written test items from item bank</p>
Minimum Required Tools/ Equipment/ Implements or Equivalent	<p>hoe, forked hoe, harvest containers, knives, trays, hand gloves, transport means, secateurs, gumboots, harvesting bags, refrigerators</p>
Minimum Required Materials and Consumables or Equivalent	<p>water, towels, overalls, aprons, polythene sheets, strings, water, masking tapes, record books, disinfectants/fumigants</p>
Special Notes	

Code	UE/VF/M1.4
Module title	M1.4: Establish a Vegetable Farming Enterprise
Related Qualification	Part of Uganda Vocational Qualification (Vegetable Farmer UVQ 1)
Qualification Level	1
Module purpose	At the end of this module, a trainee shall be able to set up and operate a profitable vegetable farming business
Learning-Working Assignments (LWAs)	<p>LWA 4/1: Plan Vegetable Farming Works</p> <p>LWA 4/2: Market Vegetable Products</p> <p>LWA 4/3: Perform Basic Administrative Tasks</p> <p>LWA 4/4: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> 1. The learning exercises may be repeated until the trainee acquires targeted competence. 2. The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning assignment
Related Practical Exercises (PEXs)	<p>LWA 4/1: Plan Vegetable Farming Works</p> <p>PEX 1.1: Develop business idea</p> <p>PEX 1.2: Conduct research</p> <p>PEX 1.3: Determine market</p> <p>PEX 1.4: Prepare budget</p> <p>PEX 1.5: Determine farm inputs</p> <p>PEX 1.6: Prepare work schedules</p> <hr/> <p>LWA 4/2: Market Vegetable Products</p> <p>PEX 2.1: Grade products</p> <p>PEX 2.2: Weigh produce</p> <p>PEX 2.3: Price produce</p> <p>PEX 2.4: Brand vegetables</p> <p>PEX 2.5: Label vegetables</p> <p>PEX 2.6: Advertise vegetables</p> <p>PEX 2.7: Transport produce</p> <p>PEX 2.8: Sell produce</p> <hr/> <p>LWA 4/3 Perform Basic Administrative Tasks</p> <p>PEX 3.1: Recruit workers</p> <p>PEX 3.2: Supervise works</p>

	<p>PEX 3.3: Train workers PEX 3.4: Assign work to the workers PEX 3.5: Procure farm inputs PEX 3.6: Maintain tools and equipment PEX 3.7: Communicate with stakeholders PEX 3.8: Prepare vegetable production records PEX 3.9: Prepare vegetable sales records PEX3.10: Participate in technical meetings/ workshops</p> <p>LWA 4/4 Perform Occupational Health Safety and Environmental Protection Practises.</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</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"> • Pricing strategies • Promotional techniques • Business planning • Financial mobilisation • Human resource management • Market trends • Budgeting • Research methods • Record keeping • OHSE precautions
Average duration of learning	<p>160 hours (20days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • 5 day of occupational theory and • 15 days of occupational practice
Suggestions on organisation of learning	Learning activities in the training centre nearby vegetable gardens, exhibitions etc.

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	labels, noticeboard, refrigerator, weighing equipment, ICT equipment, accessories and service
Minimum required materials and consumables or equivalent	packaging materials, water, cleaning materials, vegetable produce, stationery
Special notes	

2.0 ATP- PART III

Assessment Instruments for a VEGETABLE 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 reviewed 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 **VEGETABLE 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	2
6.	Performance (Practical) test items	1
Total		9

WRITTEN TEST ITEMS (SAMPLES)

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 1			
Occupational Title:	Vegetable 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:	August 2020			
Related modules:	M1.2			
Time allocation:	2 minutes			

Test Item	State any two factors that should be considered when selecting the type of a fertiliser to use in vegetable growing.
Answer spaces	(i)
	(ii)
Expected key (answers)	(i) Type of soil
	(ii) Vegetable type
	(iii) Method of application
	(iv) Stage of plant growth

DIT/ QS		Test Item Database Written (Theory) Test Item- no. 2		
Occupational Title:	Vegetable 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:	August 2020			
Related modules:	M1.4			
Time allocation:	3 minutes			

Test Item	Suggest any four activities involved in marketing vegetables
Answer spaces	(i) (ii) (iii) (iv)
Expected key (answers)	(i) Pricing (ii) Advertising (iii) Branding (iv) Grading (v) Transporting (vi) Packaging (vii) Record keeping (viii) Selling

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 3			
Occupational Title:	Vegetable 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:	August 2020			
Related Module:	M1.1			
Time allocation:	2 minutes			

Test Item	Which of the following explains why vegetable seedlings are hardened off in a nursery bed?
Distractors and correct answer	A. To make vegetable crops mature early B. To improve the quality of vegetable C. To prepare them for field growing conditions D. To make them resistant to pests.

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

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 4			
Occupational Title:	Vegetable 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:	August 2020			
Related Module:	M1.3			
Time allocation:	2 minutes			

Test Item	The stage of growth at which a vegetable crop is harvested depends on.....
Distractors and correct answer	A. Type of crop B. Time of planting C. Care given to the plant D. Type of soil

Key (answer)	A
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DIT/ QS	Test Item Database Written (Theory) Test Item- no. 5			
Occupational Title:	Vegetable 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:	August 2020			
Related module:	M1.4			
Time allocation:	3 Minutes			

Test Item	Match the following practices involved in raising vegetable seedlings with their respective importance
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Column A (Practices)	
1	Make a nursery bed
2	Control pests
3	Harden off
4	Pricking out

Column B (importance)	
A	To prevent disease spread
B	To prepare seedlings for field conditions
C	To control weeds
D	To groom seedlings
E	To increase yields
F	To regulate seedling density

Key (answer)	1:D, 2:E, 3:B, 4:F
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DIT/ QS		Test Item Database Written (Theory) Test Item- no. 06			
Occupational Title:	Vegetable Farmer				
Competence level:	Level1				
Code no.					
Test Item type:	Short answer				
	Multiple choice				
	Matching item	Generic	Cause- Effect	Work- sequence	
			√		
Complexity level:	C2				
Date of OP:	August 2020				
Related Module:	M1.3				
Time allocation:	2 minutes				

Test Item	Match the following seedling growth effect with their causes.
------------------	---

Column A (growth effect)	
1	Seedling wilting
2	Seedling root swelling
3	Damping off
4	Yellowing of leaves

Column B (causes)	
A	Nematodes
B	Poor site selection
C	Pulverised nursery bed
D	Water stress
E	Fungal infection
F	Lack of nitrogen in the soil
G	Poor irrigation

Key (answer)	1:D, 2:A, 3:E, 4:F
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DIT/ QS	Test Item Database Written (Theory) Test Item- no. 7			
Occupational Title:	Vegetable 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:	August 2020			
Related Module:	M1.2			
Time allocation:	2 minutes			

Test Item	Arrange the following steps taken while transplanting seedlings
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Column A (chronology)	Column B (work steps) in wrong chronological order	
1 st	A	Transport seedlings
2 nd	B	Scoop and lift seedlings
3 rd	C	Shade seedlings
4 th	D	Wear personnel protective gear
5 th	E	Dig planting holes
6 th	F	Water the nursery bed
7 th	G	Place seedlings in plant holes

Key (answer)	1-D, 2-F, 3-E, 4-B, 5-A, 6-G, 7-C
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DIT/ QS	Test Item Database Written (Theory) Test Item- no. 8			
Occupational Title:	Vegetable 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:	August 2020			
Related Module:	M1.1			
Time allocation:	2 minutes			

Test Item	Arrange the steps followed when setting up a vegetable nursery bed in their chronological order
------------------	---

Column A (chronology)	Column B (work steps) in wrong chronological order	
1 st	A	Sterilise soil
2 nd	B	Select soil
3 rd	C	Select site
4 th	D	Prepare seed and other planting material
5 th	E	Sow seeds
6 th	F	Harden seedlings
7 th	G	Pot seedlings
8 th	H	Erect nursery bed

Key (answer)	1: C,2:B, 3:A, 4:D, 5:E, 6:H, 7:G, 8-F
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PERFORMANCE TEST ITEMS (SAMPLES)

DIT/ QS	Test Item Database Performance Test Item- no.9
Occupational Title:	Vegetable Farmer
Competence level:	1
Code no.	
Test Item:	Prepare a vegetable nursery seed bed of 4mx1m ready to receive green pepper seeds.
Complexity level:	P2
Date of OP:	August 2020
Related Module:	M1.1
Related skills and knowledge:	<ul style="list-style-type: none"> • Site identification and land preparation • Soil sterilisation • Fertiliser application • Measurements • Soil conservation techniques • Tools and equipment usage
	forked hoe, hand hoe, rake, wheelbarrow, hand fork, tape measure, string, fertiliser, dry grass, slasher, match box, pesticide, timber, banana stem, stones/bricks record book/ computer, nails and hammers.
Time allocation:	4 hours
Preferred venue:	Virgin field in the school farm
Remarks for candidates	Avail protective gear Observe health, safety and environment protection
Remarks for assessors	Provide all the tools equipment and materials listed above

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
1	Preparation before task	Wore protective gear - Overall - Gumboot - Head gear - Gloves		4
		Assembled tools and equipment		2
		Assembled materials		2
2	Selection of site	Selected site	3	
		Fairly flat site observed		3
3	Clearing of site	Slashed the site	3	
		Bush free site observed		4
4	Tilling of site	Dug the soil	2	
		Harrowed the soil	2	
		Soil of fine tilth observed		3
		Raked soil	2	
		Soil free from foreign materials observed		2
		Levelled bed	2	
		Relatively flat bed observed		3
5	Sterilizing soil	Spread dry grass on the bed	2	
		Even distribution of grass		2
		Set fire on the grass	1	
		Ash observed all over the bed		2
6	Fertiliser application	Burnt ash incorporated into the soil	2	
		Uniform soil mixture observed		3
		Applied fertiliser	2	
		Uniform application observed		2
		Recorded type of fertiliser used and date of application	2	
		Record of fertilizer application verified		2

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
7	Demarcation of bed	Took measurements of the bed	3	
		Ground specifications observed (4mx 1m)		4
		Recorded bed dimension		2
8	Conservation of soil against erosion	Created drainage channels	2	
		Drainage channels around the bed observed		3
		Firmed soil in the bed	3	
		Firmed soil observed		3
9	Demobilisation of resources	Cleaned tools and equipment	2	
		Dirt free tools and equipment observed		2
		Stored tools and equipment		2
TOTAL			33	50
Maximum score (Y)			83	

4.0 ATP- PART IV

INFORMATION ON REVIEW PROCESS

4.1 Occupational Profile Reviewed (August 2020)

The occupational profile was exclusively reviewed by job practitioners who were working in the Vegetable Farmer 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 Reviewed (August 2020)

Based on the Occupational Profile for Vegetable farmer of August 2020, Training Modules were reviewed by job practitioners, guided by UVQF Facilitators.

4.3 Test Item Review (August 2020)

Based on the Occupational Profile for Vegetable farmer of August 2020, and Training Modules, Test Items were reviewed 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 Review Panels

The participating panels of job practitioners required at different stages were constituted by members from the following organisations:

No.	Name	Institution/ Organisation
1.	Osire John	UNEB Examiner
2.	Isooba James	Iganga Secondary School
3.	Mulumba Mutema	NCDC
4.	Okiror Akol Charles.	NICA
5.	Aringaniza Ingrid	21 st Century Sustainability Options Ltd
6.	Proscovia Nakiryia Uromcamu	Acer Land Agro-Based Enterprises
7.	Byaruhanga Benson	Benjoh Trusted Co. Ltd
8.	Tukwasibwe William	Global Agro-Enterprises Ltd
9.	Hellen Machika	Feed All (U) Ltd
10.	Beeyo Moses Bernard	UNEB Examiner/Teacher
11.	Bukenya Bonny	Bombo Army Secondary School
12.	Oryem Raphael	Retired Lecturer-Gulu

4.6 Facilitator team

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

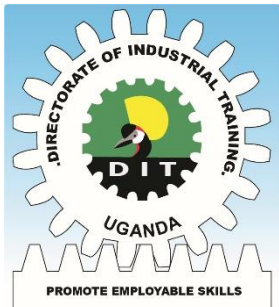
1. **Team Leader:** Ms. Mukyala Ruth, Ag Deputy Director, DIT
2. **Facilitators:** Ms. Komugisha Noeline QO, Ms. Kyarizi Lovance
3. **DIT Data Entrants:** Ms. Nalwanga Phionah RO, Ms. Ahebwa Joan, Ms. Tukundane Bonnie, Ms. Mushabenta Brendah, Mr. Orikiriza Andrew, Ms. Ainembabazi Faith, Ms. Nabimanya Sharon
4. **Compiled by:** Ms. Nalwanga Phionah Records officer, DIT
5. **Edited by:** Ms. Mukyala Ruth Ag. DD, DIT, Qualification Standards Dept. DIT
6. **Coordinated by:** Mr. Byakatonda Patrick, Ag. Director, DIT;

4.7 Reference time:

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

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