



THE REPUBLIC OF UGANDA
Ministry of Education and Sports

Directorate of Industrial Training



**Assessment and Training
Package**

For a

CATTLE FARMER

Qualification Level: 1

Occupational Cluster: Agriculture

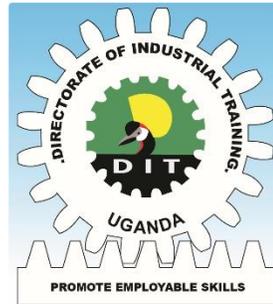
August 2020

Reviewed by:

**Qualifications Standards Department
Directorate of Industrial Training**

Funded by:

Government of Uganda



Assessment and Training Package

**For a
CATTLE FARMER**

Qualification Level: 1

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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 **CATTLE 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 CATTLE FARMER.** This Occupational Profile which was reviewed by Cattle Farmers practicing in the world of work mirrors the duties and tasks that Cattle Farmers are expected to perform.
- 0.2 **PART II: Training Modules** in the form of guidelines to train Cattle 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 CATTLE FARMER. These assessment instruments were reviewed jointly by job practitioners (Cattle 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 rabbit 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 & 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) competency is understood as the ability to perform tasks common to an occupation to a set standard.
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 LWA 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 (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/behaviour, 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.

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 CATTLE FARMER

- 1.1 The OCCUPATIONAL PROFILE (OP) for a CATTLE FARMER below defines the **Duties** and **Tasks** a competent CATTLE 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 panellists defined 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 panellists, facilitators and coordinators who participated in developing this Occupational Profile are listed on the following page.

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

Expert Panel

Nampano Ronald
Bugema University

Sendikaddiwa James Kajubi
NCDC

Tukwasiibe William
Global Agro Enterprises Limited

NamugabwePetua
UNEB Examiner

Okonye Xavier
UNEB Examiner

James Namara
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KRONA Farm

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UNEB Examiner

Ayo William
UNEB Examiner

Tyaba George
Kirinya Women's Diary
Corporate Society

Kansiime Grace
Agadi Dairy Farm

Kakama Arnold
Ultra Mordern Consultants

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Jackie Davis Farming World

Wamono Joseph
Nansa & Moe Ranchers

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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

"CATTLE FARMER"

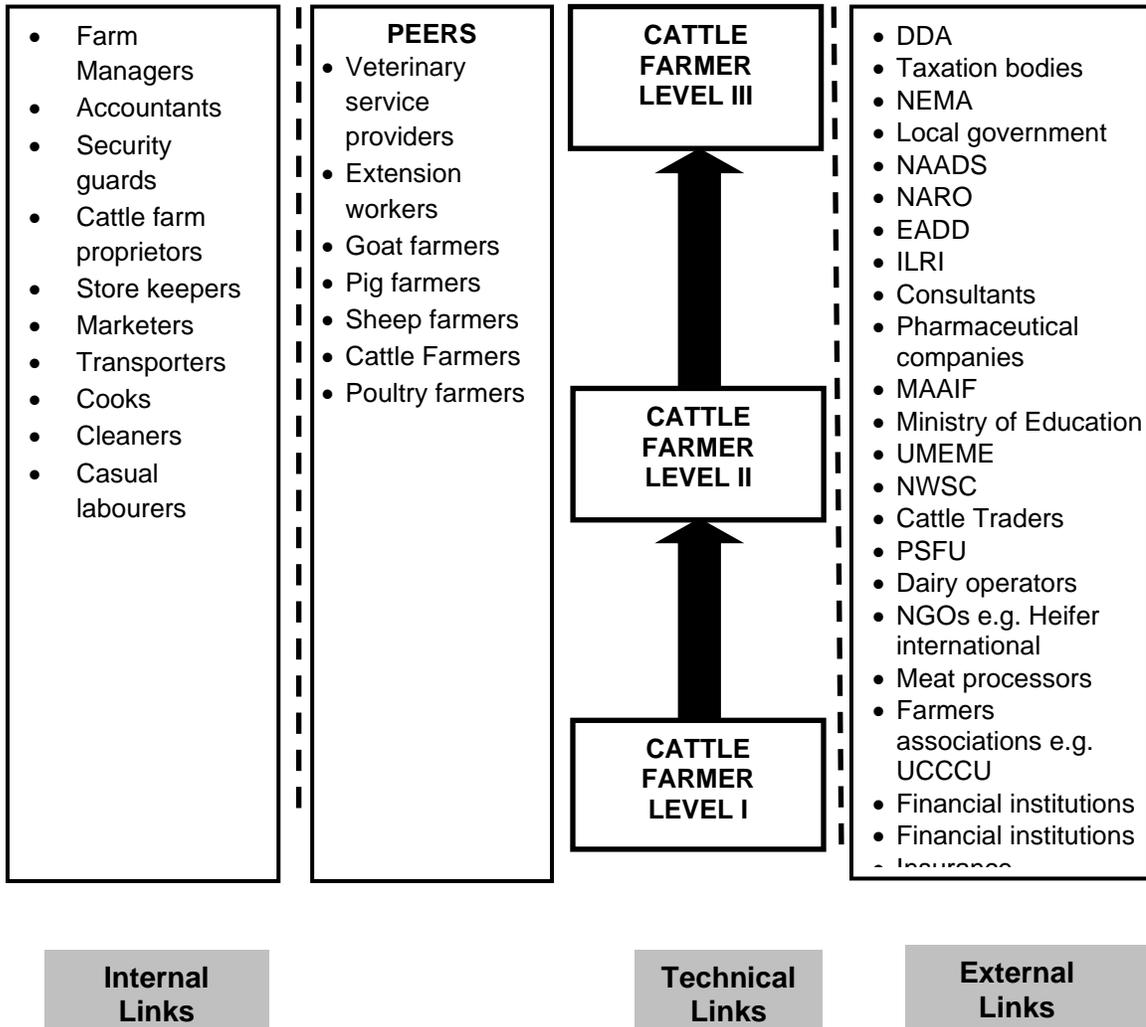
Reviewed by: Directorate of Industrial Training
(Qualifications Standards)

Dates of workshop: 17th –21st August 2020

NOMENCLATURE - CATTLE FARMER

Definition: A Cattle Farmer is a person who rears cattle for domestic and commercial purposes.

JOB ORGANISATION CHART FOR A CATTLE FARMER



UVQ Level I Cattle Farmer; is a person who cares for indigenous/ cross breed cattle for diary/ beef production.

UVQ Level II Cattle Farmer; is a person who cares for exotic breeds of cattle for either beef of diary production or both.

UVQ Level III Cattle Farmer; is a person who cares for breeding cattle.

Duties and Tasks

A. PLAN CATTLE FARMING ENTERPRISE	A1. Carry out feasibility study	A2. Prepare business plan	A3. Prepare budget
	A4. Determine human capital	A5. Determine source of funding	A6. Prepare work schedules
	A7. Determine water and energy source	A8. Determine breed	A9. Determine land requirements
	A10. Determine materials, tools and equipment	A11. Determine stocking density	A12. Design the farm layout
B. ESTABLISH CATTLE FARM	B1. Acquire land	B2. Demarcate land	B3. Mobilise materials, tools and equipment
	B4. Set out farm layout	B5. Construct farm structures	B6. Establish water source
	B7. Install energy source	B8. Stock farm	
C. ESTABLISH AND MANAGE PASTURES	C1. Prepare land	C2. Select pastures	C3. Plant pastures
	C4. Weed pastures	C5. Apply growth boosters	C6. Irrigate pastures
	C7. Control pests and diseases	C8. Harvest pastures	C9. Conserve fodder
D. FEED CATTLE	D1. Graze cattle	D2. Prepare feeds	D3. Store feeds
	D4. Clean feed/water troughs	D5. Feed cattle	D6. Water cattle
	D7. Monitor cattle growth	D8. Steam up cattle	D9. Keep feed records
	D10. Keep feed intake records		

E. BREED CATTLE	E1. Select breed stock	E2. Mate cattle	E3. Care for pregnant cattle
	E4. Assist calving	E5. Keep breeding records	E6. Conduct breeding trials
	E7. Extract semen		

F. MANAGE CATTLE	F1. Care for calves	F2. Control parasites and diseases	F3. Control vices
	F4. Vaccinate cattle	F5. Treat cattle	F6. Trim cattle hooves
	F7. Isolate sick cattle	F8. Train calves	F9. Dock cattle
	F10. Castrate cattle	F11. Groom cattle	F12. Cull cattle
	F13. Dehorn cattle	F14. Grade cattle	F15. Milk cattle
	F16. Mark cattle for identification	F17. Entertain cattle	F18. Wean calves
	F19. Dry cattle	F20. Perform Surrogate mothering	

G. MANAGE FARM TOOLS, EQUIPMENT AND STRUCTURES	G1. Allocate tools and equipment to workers	G2. Operate farm equipment	G3. Prepare maintenance schedule
	G4. Service farm tools and equipment	G5. Repair/ replace equipment parts	G6. Store tools and equipment
	G7. Repair farm structures	G8. Keep inventory	G9. Lease tools/equipment

H. PERFORM OCCUPATIONAL SAFETY, HEALTH AND ENVIRONMENTAL PROTECTION PRACTICES	H1. Sensitise workers on occupational safety, health and environmental protection practices	H2. Observe health and safety protection practices	H3. Wear personnel protective gear
	H4. Provide sanitation facilities	H5. Control over grazing	H6. Administer first aid
	H7. Perform firefighting	H8. Dispose waste	H9. Display safety notices

UVQF: Assessment and Training Package (ATP) for a CATTLE FARMER
QUALIFICATION LEVEL 1 **August 2020**

	H10. Provide shade for cattle	H11. Handle hazardous chemicals	
I. MARKET FARM PRODUCTS	I1. Grade cattle farm products	I2. Preserve cattle products	I3. Price cattle farm products
	I4. Package cattle farm products	I5. Brand cattle farm products	I6. Advertise cattle farm products
	I7. Store cattle farm products	I8. Participate in farmers' exhibitions	I9. Transport cattle farm products
	I10. Sell cattle products		
J. PERFORM ADMINISTRATIVE TASKS	J1. Mobilise resources	J2. Recruit workers	J3. Assign work
	J4. Prepare work schedule	J5. Train workers	J6. Supervise works
	J7. Appraise workers	J8. Attend technical meetings	J9. Advise clients and workers on technical matters
	J10. Prepare reports	J11. Mentor workers	J12. Manage conflicts
	J13. Collaborate with service providers	J14. Prepare records	J15. Remunerate workers
	J16. Pay bills	J17. Register cattle farm enterprise	J18. Insure enterprise
K. PURSUE CONTINUOUS PROFESSIONAL DEVELOPMENT	K1 Network with peers	K2 Participate in technical seminars/ workshops	K3 Obtain membership in professional associations
	K4 Review trade publication	K5 Train interns, apprentices and other stake holders	K6 Benchmark best cattle farming practices
	K7 Participate in trade fairs and shows	K8. Pursue further studies	

Additional Information

Generic Knowledge & Skills

1. Tools equipment and implement usage, operation and maintenance
2. Waste management
3. Safety, health and environmental practices and regulations
4. Environmental awareness
5. Quality control
6. Communication skills
7. Information and communication technology
8. Financial literacy
9. Problem solving
10. Numeracy and literacy skills
11. Drug/vaccine administration in cattle
12. First aid administration
13. Care for calves and cattle
14. Cattle farm bi-products utilisation
15. Team work and co-operation
16. Resource mobilisation and management
17. Entrepreneurship skills
18. Public relations
19. Counselling and guidance
20. Cattle housing and structures
21. Time management
22. Types of transport
23. Staff training and mentoring skills
24. Analytical skills
25. Record keeping
26. Cattle feeds conservation
27. Cattle growth and development stages
28. Business and customer service skills
29. Human resource management
30. Cleaning skills
31. A good eye for detail
32. Ergonomics
33. Cattle diseases, their signs, symptoms and mitigation strategies
34. Cattle breeds
35. Cattle behaviour
36. Cattle nutrition
37. Cattle gestation period
38. Planning skills
39. Leadership skills
40. Pastures and their management
41. Livestock management systems
42. Pests and parasites and their control
43. Innovative skills
44. Interpersonal relations
45. Marketing
46. Cattle farm planning, management and evaluation

Tools, Materials and Equipment	
1. Wheelbarrows	45. Gum boots
2. Hammer	46. Head gear
3. Scrubbing brushes	47. Milking salve
4. Nails	48. Record books
5. Pangas	49. Disk ploughs and harrow
6. Slashers	50. Ropes
7. Bow saw	51. Computers and telephones
8. Pasture seeds	52. Vehicles (Tractors and trucks)
9. Pesticides)	53. Stationery
10. First aid box	54. Furniture
11. Thermometer	55. De-horning tools and materials
12. Metal detectors	56. Notches
13. Milk cans	57. Drenching gun
14. Jerrycans	58. Branding rod
15. Knapsack sprayers	59. Tarpaulins
16. Bucket pump	60. Training boards
17. Weighing scales	61. Tsetse fly traps
18. Hoes	62. Cotton seed cake
19. Rakes	63. Hoof trimmers
20. Fencing materials e.g. barbed wires, chain link, live fence	64. Water and feed troughs
21. Watering cans	65. Horse pipes
22. Timber	66. Water pipes and pumps
23. Spades	67. Taps
24. Aggregates	68. Growth boosters
25. Ear tags and tag applicator	69. Fire extinguishers
26. Brooms	70. Store
27. Packaging material	71. Incinerator
28. Maize bran	72. Generator and fuel
29. Blood and born meals	73. Harvesters
30. Cement	74. Chaff cutter
31. Iron sheets	75. Milking machines
32. Water	76. Fertilisers
33. Milling machines	77. Feed mixers
34. Farm yard manure	78. Syringes
35. Disinfectants	79. Needles
36. Drugs and vaccines	80. Refrigerators
37. Teat dips	81. Knives
38. Soap	82. Multi vitamins
39. Lactometer	83. Shells
40. Mineral licks	84. Waste bins
41. Spray race/dip tank/crush	85. Wood preservatives
42. Milk sterilisers	86. Solar panels and sockets
43. Water reservoirs	87. Castrating materials and tools
44. Foot bath	88. Milk strainer and strip cup
45. Trocar and cannula	89. Magnetic applicators

Attitudes/ Traits/ Behaviour	Future Trends and Concerns
1. Self-motivated	1. Self-criticism
2. Trustworthy	2. Customer care
3. Honest	3. Bench marking with cattle farmers in other countries
4. Tolerant	4. Computer literacy
5. Hardworking	5. Need to have cattle farming products on the international markets
6. Team player	6. Need for advanced technology
7. Disciplined	7. Skills competition in cattle farming products
8. Good time manager	8. Public awareness of cattle farming and its benefits
9. Committed	9. Open line of progression/ career development
10. Good listener	10. Value addition to cattle products
11. Flexible	11. Poor extension services
12. Result oriented	12. Price fluctuations of cattle products and inputs
13. Curious	13. Fake/ expired drugs on the market
14. Competitive but cooperative	14. Fake veterinary personnel
15. Innovative and creative	15. Lack of vaccines
16. Physically fit	16. Limited management skills
17. Knowledgeable	17. High prices for exotic breeds
18. Patient	18. Inadequate land for expansion of cattle farming
19. Polite	19. Seasonal markets
20. Social	20. Severe climate changes
21. Vigilant	21. Limited processing industries
22. Calm	22. Government policy
23. Respectful	23. Inadequate networking among cattle farmers
24. Confident	24. Establishment of new pasture techniques
25. Intelligent	25. Regional economic integration
26. Logical	26. Parasite and disease outbreak
27. Trainable	27. Deforestation
28. Tidy	28. Heavy competition from other sectors
29. Kind	29. Real estates
30. Empathetic	30. Production of alternative commodities
31. Integrity	31. Insurance
32. Healthy	32. Population increase
33. Entrepreneur	33. Political climate
	34. Financial services
	35. Natural calamities

2.0 ATP – PART II

Training Modules for a CATTLE 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 Cattle 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 developed jointly by both instructors and job practitioners. They were developed using the Occupational Profile as a reference point and taking into account the specifications of training and learning outcomes.
- 2.4 The modules contain “Learning-Working Assignments” (LWAs) and related “Practical Exercises” (PEXs) as key elements.
- LWAs are simulated or real job situations/assignments that are suitable for learning in a training environment (e.g. “small projects”). In a working environment, LWAs are real work situations.
- PEXs are therefore sub-sets of a LWA.
- 2.5 In principle, and following the philosophy of Competence-Based Education and Training (CBET), the modules can be used as a guide for learning in a training Centre, at the workplace; or a combination of both.

WHO IS A CATTLE FARMER QUALIFICATION LEVEL 1?

A Cattle Farmer Level 1 is a person who cares for indigenous/ cross breed cattle for diary or beef production or both for domestic and commercial purposes.

TRAINING MODULES FOR A CATTLE FARMER UVQ LEVEL 1

Code	Module Title	Average duration	
		Contact hours	Weeks
UE/CF/M1.1	Establish Cattle Farming Enterprise	80	2
UE/CF/M1.2	Construct Farm Structures	80	2
UE/CF/M1.3	Manage Pastures	80	2
UE/CF/M1.4	Feed Cattle	120	3
UE/CF/M1.5	Manage Cattle Diseases and Parasites	320	8
UE/CF/M1.6	Milk Dairy Cattle	160	4
UE/CF/M1.7	Manage Calves	120	3
Summary	7 modules	960 hours	24 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 160 hours 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 instruction, as the minimum exposure.

Prior to summative assessment by recognised Agencies, the users of these Module 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/CF/M1.1
Module title	M1.1: Establish Cattle Farming Enterprise
Related Qualification	Part of: Uganda Vocational Qualification (CATTLE FARMER UVQ1)
Qualification Level	1
Module purpose	After completion of this module, the trainee shall be able to set up and sustain a cattle farming enterprise
Learning-Working Assignments (LWAs)	<p>LWA 1/1: Prepare Production Plan LWA 1/2: Mobilise Resources and Implement LWA 1/3: Market Cattle Farming Products LWA 1/4: Manage Cattle Enterprise LWA 1/5: 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 a targeted competence.</i> <i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i>
Related Practical Exercises (PEXs)	<p>LWA 1/1: Prepare Production Plan PEX1.1: Develop business idea PEX1.2: Determine enterprise location PEX1.3: Determine required resources PEX1.4: Identify sources of resources PEX1.5: Prepare budget PEX1.6: Determine market PEX1.7: Obtain enterprise related training PEX1.8: Register enterprise PEX1.9: Schedule production activities</p> <p>LWA 1/2: Mobilise Resources PEX2.1: Secure finances PEX2.2: Secure land PEX2.3: Recruit workers PEX2.4: Secure cattle production implements</p> <p>LWA 1/3: Market Cattle Farming Products PEX 3.1: Pack products PEX 3.2: Brand products</p>

	<p>PEX 3.3: Price products PEX 3.4: Transport products PEX 3.5: Communicate with stake holders PEX 3.6: Negotiate prices with customers PEX 3.7: Sell products PEX 3.8: Perform customer care services PEX 3.9: Provide technical advice to customers PEX 3.10: Store products PEX 3.11: Exhibit farm products</p> <p>LWA 1/4: Manage Cattle Enterprise PEX 4.1: Set up enterprise PEX 4.2: Keep business record PEX 4.3: Manage finances PEX 4.4: Monitor enterprise development trends PEX 4.5: Network with peers on technical matters PEX 4.6: Manage human resource PEX 4.7: Prepare portfolio PEX 4.8: Pay bills</p> <p>LWA 1/5: Perform Occupational Health, Safety and Environmental Protection Practices PEX 5.1: Administer first aid PEX 5.2: Maintain personal hygiene and sanitation PEX 5.3: Wear personal protective gear PEX 5.4: Display safety notes PEX 5.5: Manage wastes PEX 5.6: Perform fire fighting PEX 5.7: Manage physio social conditions</p>
Occupational health and safety	<p>Precautions, rules and regulations of applications 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"> • Business management • Human resource management • Marketing strategies • First aid administration • Waste management • Occupational health and safety hazards and mitigation strategies

	<ul style="list-style-type: none"> • Budgeting • Resource mobilisation • Computer literacy • Numeracy and literacy • Communication skills • Risk management • Project planning
Average duration of learning	80 hours (10 days) of nominal learning suggested to include: <ul style="list-style-type: none"> • <i>3 day of occupational theory and</i> • <i>7 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 established regulations by a recognised assessment body using related practical and written test items from Item bank
Minimum required tools/ equipment/ implements or equivalent	furniture, computers, calculators, phones, trucks, containers, pangas, knives, weighing scales
Minimum required materials and consumables or equivalent	stationery, fuel, packaging materials, the Internet, airtime, electricity
Special notes	The theory must be integrated into the practice during delivery

Code	UE/CF/M1.2
Module title	M1.2: Construct Farm Structures
Related Qualification	Part of: Uganda Vocational Qualification (CATTLE FARMER UVQ1)
Qualification Level	1
Module purpose	After completion of this module, a trainee shall be able to put in place and manage the various farm structures
Learning-Working Assignments (LWAs)	<p>LWA 2/1: Erect Farm Structures LWA 2/2: Maintain Farm Structures LWA 2/3: Manage Construction Tools and Equipment LWA 2/4: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> 1. <i>The learning exercises may be repeated until the trainee acquires a targeted competence.</i> 2. <i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i>
Related Practical Exercises (PEXs)	<p>LWA 2/1: Erect Farm Structures PEX 1.1. Select site PEX 1.2. Design farm structure PEX 1.3. Clear area PEX 1.4. Demarcate area PEX 1.5. Determine building materials PEX 1.6. Secure building materials PEX 1.7. Construct farm structure PEX 1.8. Furnish farm structures</p> <p>LWA 2/2: Maintain Farm Structures PEX 2.1. Identify structures for maintenance PEX 2.2. Acquire maintenance materials PEX 2.3. Perform preventive maintenance of farm structures PEX 2.4. Perform corrective maintenance of farm structure PEX 2.5. Keep maintenance records</p>

	<p>LWA 2/3: Manage Construction Tools and Equipment</p> <p>PEX 3.1. Procure tools and equipment PEX 3.2. Store tools and equipment PEX 3.3. Operate tools and equipment PEX 3.4. Clean tools and equipment PEX 3.5. Keep inventory PEX 3.6. Repair/replace worn out/damaged tools and equipment PEX 3.7. Dispose wornout tools and equipment</p>
	<p>LWA2/4: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>PEX 4.1: Conserve soil and water PEX 4.2: Wear protective gear PEX 4.3: Administer first aid PEX 4.4: Display safety signs PEX 4.5: Observe general hygiene PEX 4.6: Manage waste</p>
<p>Occupational health and safety</p>	<p>Precautions, rules and regulations of applications 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"> • Building construction • First aid administration • Farm structures and buildings • Land tenureship • Building tools and equipment • Store management • Maintenance of tools, equipment and farm structures • Sanitation and hygiene • Occupational health and safety hazard and mitigation strategies • Procurement processes • Site selection
<p>Average duration of learning</p>	<p>80 hours (10 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • 2 day of occupational theory and • 8 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 centre or its equivalent provided all equipment and materials required for training are in place.
Assessment	Assessment to be conducted according to established regulations by recognised assessment body using related practical and written test items from Item bank
Minimum required tools/ equipment/ implements or equivalent	nails, hammer, rope, poles/ posts, timber, gumboots, gloves, overalls, eye goggles, helmet, wheelbarrow, saws, pangas, sign posts, spades, shovels, trucks, paint brushes, pliers, hoes, wire strainer, strainer, ladders, trowel, spirit level, tape measure, water containers, waste bins
Minimum required materials and consumables or equivalent	Building and construction materials, fuel, wood preservatives, DPC, roofing materials, fencing materials,
Special notes	The theory must be integrated into the practice during delivery.

Code	UE/CF/M1.3
Module title	M1.3: Manage Pastures
Related Qualification	<u>Part of:</u> Uganda Vocational Qualification (Cattle FARMER UVQ1)
Qualification Level	1
Module purpose	After completion of this module, the trainee shall be able to grow, maintain and conserve pastures.
Learning-Working Assignments (LWAs)	<p>LWA 3/1: Grow Pastures LWA 3/2: Maintain Pastures LWA 3/3: Conserve Pastures LWA 3/4: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> 1. <i>The learning exercises may be repeated until the trainee acquires a targeted competence.</i> 2. <i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i>
Related Practical Exercises (PEXs)	<p>LWA 3/1: Grow Pastures</p> <p>PEX 1.1. Select site PEX 1.2. Clear site PEX 1.3. Fence site PEX 1.4. Plough site PEX 1.5. Sterilise site PEX 1.6. Identify pasture seed stock PEX 1.7. Plant pastures PEX 1.8. Irrigate pasture PEX 1.9. Apply fertilisers</p>
	<p>LWA 3/2: Maintain Pastures</p> <p>PEX 2.1. Weed pastures PEX 2.2. Maintain botanical composition of pastures PEX 2.3. Top pastures PEX 2.4. Control pasture pests and diseases PEX 2.5. Reseed pasture/ over-sow PEX 2.6. Monitor pasture growth</p>

	<p>LWA 3/3: Conserve Pastures PEX 3.1. Harvest pastures PEX 3.2. Transport pastures PEX 3.3. Chop pastures PEX 3.4. Ensile pastures PEX 3.5. Dry pastures PEX 3.6. Bale pastures</p> <p>LWA 3/4: Perform Occupational Health, Safety and Environmental Protection Practices PEX 4.1. Wear personal protective gear PEX 4.2. Maintain general hygiene PEX 4.3. Manage waste PEX 4.4. Weed poisonous plants PEX 4.5. Plant trees PEX 4.6. Conserve soil and water PEX 4.7. Observe feed withdraw PEX 4.8. Administer first aid PEX 4.9. Dig drainage channels PEX 4.10. Perform firefighting PEX 4.11. Handle chemicals</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"> • Pasture types • Pasture varieties • Pasture management • Re-seeding pastures • Fertilisers and manure types • Seed bed preparation • Fertiliser application • Pasture conservation • Pasture harvesting • Irrigation methods • Waste management • Soil and water conservation • First aid administration • Firefighting

	<ul style="list-style-type: none"> • Land reclamation • Fencing • Pasture pests and disease control • Occupational health and safety • Personal protection
Average duration of learning	80 hours (10 days) of normal learning suggested to include: <ul style="list-style-type: none"> • <i>2 day of occupational theory and</i> • <i>8 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 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, pangas, slashers, knap sack sprayers, a plough, planters, harvester seed drills, gloves, overall, string, rope, rake, boom sprayer, mask, sickles, gumboots, water pump, pasture chopper, wheel barrow, trucks, fire extinguisher, sterilising equipment, first aid
Minimum required materials and consumables or equivalent	Pasture seeds, books, water, manure/ fertilisers, agro-chemicals, stationery, polythene bags, tarpaulin, fencing materials, irrigation system
Special notes	The theory must be integrated into the practice during delivery

Code	UE/CF/M1.4
Module title	M1.4: Feed Cattle
Related Qualification	<u>Part of:</u> Uganda Vocational Qualification (CATTLE FARMER UVQ1)
Qualification Level	1
Module purpose	After completion of this module, a trainee shall be able to prepare and serve cattle feeds for beef or dairy or both.
Learning-Working Assignments (LWAs)	<p>LWA 4/1: Prepare Supplementary Feeds</p> <p>LWA 4/2: Zero Graze Cattle</p> <p>LWA 4/3: Graze Cattle</p> <p>LWA 4/4: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> 1. <i>The learning exercises may be repeated until the trainee acquires a targeted competence.</i> 2. <i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i>
Related Practical Exercises (PEXs)	<p>LWA 2/1: Prepare Supplementary Feeds</p> <p>PEX 1.1. Obtain ingredients</p> <p>PEX 1.2. Batch ingredients</p> <p>PEX 1.3. Mix ingredients</p> <p>PEX 1.4. Store feeds</p>
	<p>LWA 2/2: Zero Graze Cattle</p> <p>PEX 2.1. Cut pasture</p> <p>PEX 2.2. Transport pasture</p> <p>PEX 2.3. Chop pasture</p> <p>PEX 2.4. Place fodder/ hay/ silage in clean trough</p> <p>PEX 2.5. Water cattle</p> <p>PEX 2.6. Feed cattle</p>
	<p>LWA 2/3: Graze Cattle</p> <p>PEX 3.1. Drive cattle standing pasture</p> <p>PEX 3.2. Perform rotational grazing</p>

	<p>LWA 2/4: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>PEX 4.1. Wear personnel protective gear PEX 4.2. Manage waste PEX 4.3. Administer first aid PEX 4.4. Control over grazing PEX 4.5. Observe general hygiene PEX 4.6. Fence paddocks PEX 4.7. Remove dangerous objects PEX 4.8. Fence water bodies PEX 4.9. Identify and mend potholes in farm PEX 4.10. Display safety signs</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"> • Feed ingredients • Feed mixing procedure • Feeding schedules • Feed supplements • Animal nutrition and feed types • Feed conservation • Water supply • Feed storage • Feed rationing • Care for cows during drying off period • Steaming up • Cow breeds • Distribute water points • Agro-forestry (tree sheds) • Occupational health, safety and environmental protection practices and regulations • Primary health care
Average duration of learning	<p>120 hours (15 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • 5 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 centre or its equivalent provided all equipment and materials required for training are in place.
Assessment	Assessment to be conducted according to established regulations by recognised assessment body using related practical and written test items from Item bank
Minimum required tools/ equipment/ implements or equivalent	weighing scale, panga, spade, wheelbarrow, sickle, over all, gloves, head gear, nose mask, brooms, gum boots, chuff cutter, pulveriser, chopping machine
Minimum required materials and consumables or equivalent	feeds, mineral supplement, water, feed concentrates, herbage, concentrates, water
Special notes	The theory and practice must be integrated during training delivery

Code	UE/CF/M1.5
Module title	M1.5: Manage Cattle Diseases and Parasites
Related Qualification	Part of: Uganda Vocational Qualification (CATTLE FARMER UVQ1)
Qualification Level	1
Module purpose	After completion of this module, a trainee shall be able to prevent and control cattle diseases and parasites
Learning-Working Assignments (LWAs)	<p>LWA 5/1: Prevent Cattle Diseases and Parasites LWA 5/2: Control Cattle Diseases and Parasites LWA 5/3: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> 1 <i>The learning exercises may be repeated until the trainee acquires a targeted competence.</i> 2 <i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i>
Related Practical Exercises (PEXs)	<p>LWA 5/1: Prevent Cattle Diseases and Parasites PEX 1.1: Vaccinate cattle PEX 1.2: Install footbath PEX 1.3: Sterilise tools and equipment PEX 1.4: Sanitise workers PEX 1.5: Clear bushes PEX 1.6: Spray cattle PEX 1.7: Monitor health of animals and workers</p> <p>LWA 5/2: Control Cattle Diseases and Parasites PEX 2.1. Identify sick cattle PEX 2.2. Isolate sick cattle PEX 2.3. Identify parasites PEX 2.4. Report to supervisor/ veterinarian PEX 2.5. Perform basic treatment</p> <p>LWA 5/3: Perform Occupational Health, Safety and Environmental Protection Practices PEX 3.1. Provide footbath PEX 3.2. Administer first aid PEX 3.3. Manage waste PEX 3.4. Display safety signs PEX 3.5. Wear personnel protective gear PEX 3.6. Observe cattle quarantine</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"> • Livestock diseases and parasites • Chemicals and drugs, their storage and application • Waste management • First aid administration • Health, safety and environmental practices • Communication skills • Numeracy and literacy • Biosecurity on cattle farm • Handling of chemicals • Report making • Animal legislations • Animal handling layout and farm structures
Average duration of learning	<p>320 hours (40 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • <i>5 days of occupational theory and</i> • <i>35 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/ farm or its equivalent provided all equipment and materials required for training are in place.
Assessment	Assessment to be conducted according to established regulations by recognised assessment body using related practical and written test items from Item bank
Minimum required tools/ equipment/ implements or equivalent	crush, gum boots, overall, head gear, gloves, rope, knapsack sprayer, dip tanks, spray race, syringes, needles, thermometer, panga, slasher, rake, basin, sign posts, labels, tractor, nose mask, drenching gun, first aid kit
Minimum required materials and consumables or equivalent	water, soap, drugs, vaccines, acaracides, disinfectants, antiseptics, stationery, animal legislations
Special notes	The theory must be integrated into the practice during delivery

Code	UE/CF/M1.6
Module title	M1.6: Milk Dairy Cattle
Related Qualification	<u>Part of:</u> Uganda Vocational Qualification (Cattle Farmer UVQ1)
Qualification Level	1
Module purpose	After completion of this module the trainee shall be able to prepare for and milk a cow effectively.
Learning-Working Assignments (LWAs)	<p>LWA 6/1: Prepare for Milking</p> <p>LWA 6/2: Stimulate Animal for Milking</p> <p>LWA 6/3: Milk Cows</p> <p>LWA 6/4: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> 1. <i>The learning exercises may be repeated until the trainee acquires a targeted competence.</i> 2. <i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i>
Related Practical Exercises (PEXs)	<p>LWA 6/1: Prepare for Milking</p> <p>PEX 1.1. Clean milking parlour</p> <p>PEX 1.2. Clean milking tools and equipment</p> <p>PEX 1.3. Assemble dairy cows</p> <p>PEX 1.4. Groom cows</p> <p>PEX 1.5. Assemble milking tools and equipment</p> <p>PEX 1.6. Restrain cows</p>
	<p>LWA 6/2: Stimulate Animal for Milking</p> <p>PEX 2.1. Entertain cow</p> <p>PEX 2.2. Serve dairy meal</p> <p>PEX 2.3. Clean udder</p> <p>PEX 2.4. Massage udder</p> <p>PEX 2.5. Apply milking salve</p>

	<p>LWA 6/3: Milk Cows</p> <p>PEX 3.1. Test for mastitis PEX 3.2. Perform manual milking PEX 3.3. Perform machine milking PEX 3.4. Strain milk PEX 3.5. Check quality PEX 3.6. Record production PEX 3.7. Store milk</p> <p>LWA 6/4: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>PEX 4.1. Observe personal hygiene PEX 4.2. Wear personnel protective equipment PEX 4.3. Administer first aid PEX 4.4. Manage waste</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"> • Milking tools and equipment • Cow nutrition • Cattle diseases and their symptoms • First aid administration • Literacy and numeracy • Milk storage techniques • Milking methods • Milk hold up • Hygiene and sanitation • Lactation • Veterinary services • Milk tests
Average duration of learning	<p>160 hours (20 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • 3 day of occupational theory and • 17 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 centre or its equivalent provided all equipment and materials required for training are in place.
Assessment	Assessment to be conducted according to established regulations by recognised assessment body using related practical and written test items from Item bank
Minimum required tools/ equipment/ implements or equivalent	milking cans, weighing scales, lactometer, jerrycans, strip cups, towel, wheelbarrow, measuring cups, scrubbing brush, feed troughs, milking machines, gloves, over coat, water troughs, spade, hoe, pails, thermometer, gumboots, nose mask, groom brush, head gear, milk strainer
Minimum required materials and consumables or equivalent	milking salve, water, disinfectants, maize bran, cotton seed cake, diary licks, shells, soap
Special notes	The theory must be integrated into the practice during training.

Code	UE/CF/M1.7
Module title	M1.7: Manage Calves
Related Qualification	Part of: Uganda Vocational Qualification (CATTLE FARMER UVQ1)
Qualification Level	1
Module purpose	After the conclusion of this module, a trainee shall be able to assist calving cows, care and raise calves effectively.
Learning Working Assignments (LWAs)	<p>LWA 7/1: Manage Calving LWA 7/2: Feed Calves LWA 7/3: House Calves LWA 7/4: Identify Calves LWA 7/5: Treat Calves LWA 7/6: Disbud Calves LWA 7/7: Castrate Calves LWA 7/8: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> 1. <i>The learning exercises may be repeated until the trainee acquires a targeted competence.</i> 2. <i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i>
Related Practical Exercises (PEXs)	<p>LWA 5/1: Manage Calving PEX 1.1. Prepare calving room PEX 1.2. Isolate calving cow PEX 1.3. Train calves PEX 1.4. Control suckling PEX 1.5. Assist calving PEX 1.6. Resuscitate calves PEX 1.7. Dispose afterbirth PEX 1.8. Serve supplementary feeding to cow</p> <p>LWA 5/2: Feed Calves PEX 2.1. Give colostrum PEX 2.2. Bucket feed calves PEX 2.3. Water calves PEX 2.4. Control suckling PEX 2.5. Perform foster mothering PEX 2.6. Wean calves</p>

	<p>LWA 5/2: House Calves PEX 3.1. Construct calf pens PEX 3.2. Clean calf pens PEX 3.3. Disinfect calf pens PEX 3.4. Stock calf pens PEX 3.5. Group calves</p>
	<p>LWA 5/3: Identify Calves PEX 4.1. Brand calves PEX 4.2. Tag calves PEX 4.3. Notch calves PEX 4.4. Tattoo calves</p>
	<p>LWA 5/4: Treat Calves PEX 4.1. Deworm cows and calves PEX 4.2. Spray calves PEX 4.3. Administer vaccines and drugs PEX 4.4. Apply acaricide PEX 4.5. Disinfect wounds</p>
	<p>LWA 5/5: Disbud Calves PEX 5.1. Identify calves PEX 5.2. Prepare tools for disbudding PEX 5.3. Restrain calves PEX 5.4. Shear around buds PEX 5.5. Remove buds PEX 5.6. Disinfect wounds PEX 5.7. Supplement feeds Treat wounds</p>
	<p>LWA 5/6: Castrate Calves PEX 6.1. Identify calves to castrate PEX 6.2. Prepare tools PEX 6.3. Restrain calves PEX 6.4. Perform castration PEX 6.5. Disinfect wound PEX 6.6. Treat wounds</p>
	<p>LWA 5/7: Perform Occupational Health, Safety and Environmental Protection Practices PEX 7.1. Wear personnel protective gear PEX 7.2. Vaccinate workers PEX 7.3. Administer first aid PEX 7.4. Manage waste PEX 7.5. Observe personal hygiene</p>

Occupational health and safety	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed of 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"> • Calves husbandry practices • Chemical management and handling • Occupational health, safety and environmental practices • Calving
Average duration of learning	<p>120 hours (15 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • 3 day of occupational theory and • 12 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 centre or its equivalent provided all equipment and materials required for training are in place.
Assessment	Assessment to be conducted according to established regulations by recognised assessment body using related practical and written test items from Item bank
Minimum required tools/ equipment/ implements or equivalent	feed troughs, water troughs, buckets, burdizzo, rubber elastrator, castration knife, budding iron, bradding iron, ear tags, tattooing equipment, notching equipment, construction tools and equipment, syringes, drenching gun, sprayer, waste bins, incinerator, nozzles, PPE, calving chain, calving aid equipment
Minimum required materials and consumables or equivalent	vaccines and drugs, arcaracides, feeds, feed supplements, mineral supplements, soap, disinfectants, water, pen construction materials, dry grass/straw
Special notes	The theory must be integrated into the practice during delivery

3.0 ATP- PART III

Assessment Instruments for a CATTLE 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 or not. In this ATP the **standards** to assess occupational competences are reflected in the form of the Occupational Profile and related Test Items.
- 3.2 Assessment of occupational competence should comprise both practical (performance) testing and written (theory/knowledge) testing.
- 3.3 Based on the Occupational Profile, 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 Directorate of Industrial Training.
- 3.4 Performance (Practical) Test Items (PTI) are closely related to typical work situations in Ugandan business and manufacturing enterprises. They comprise 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 and,
 - 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 CATTLE FARMER are included.

3.9 Overview of test item samples included:

No.	Type of Test Item	Numbers included
1	Written (Theory)- short answer	2
2.	Written (Theory)- multiple choice	2
3.	Written (Theory)- matching item- generic	2
4.	Written (Theory)- matching item (work sequence)	1
5.	Performance (Practical) test items	2
	Total	9

WRITTEN TEST ITEMS (SAMPLES)

DIT/ QS	Test Item Database Written (Theory) Test Item- No. 1			
Occupational Title:	Cattle 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:	August 2020			
Related module:	M 1.2			
Time allocation:	3 minutes			

Test Item	List four structures that can be used in disease control
Answer spaces	(i) (ii) (iii) (iv)
Expected key (answers)	(i) Crush (ii) Spray race (iii) Dip tank (iv) Fence (v) Footbath

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 2			
Occupational Title:	Cattle 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:	August 2020			
Related module:	M 1.6			
Time allocation:	2 minutes			

Test Item	State three practices which lead to clean milk production in cows
Answer spaces	(i) (ii) (iii)
Expected Key (answer)	(i) Should maintain milkers personal hygiene (ii) Cleaning and sterilising of milking equipment (iii) Washing udder of the cow before milking (iv) Cleaning the milking parlour (v) Straining/ filtering milk

DIT/ QS	Test Item Database Written (Theory) Test Item- No. 3			
Occupational Title:	Cattle 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:	August 2020			
Related module:	M 1.5			
Time allocation:	2 minutes			

Test Item	Which of the following diseases is tested prior to milking?
Answer spaces	<p style="margin-left: 40px;">A. Milk fever</p> <p style="margin-left: 40px;">B. Bloat</p> <p style="margin-left: 40px;">C. Pneumonia</p> <p style="margin-left: 40px;">D. Mastitis</p>

Key (answer)	D
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DIT/ QS	Test Item Database Written (Theory) Test Item- No. 4			
Occupational Title:	Cattle 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:	August 2020			
Related module:	M 1.5			
Time allocation:	2 minutes			

Test Item	Which of the following is a cattle parasite
Answer spaces	<p style="text-align: center;">A. Mastitis B. Brucellosis C. Rinder pest D. Tick</p>

Key (answer)	D
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DIT/ QS	Test Item Database Written (Theory) Test Item- No. 5			
Occupational Title:	Cattle 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:	AUGUST 2020			
Related module:	M 1.2			
Time allocation:	3 minutes			

Test item	Match the following ingredients in column (A) with their respective major nutrient content in column (B)
------------------	--

Column A	
1.	Maize
2.	Silver fish
3.	Bone ash
4.	Amaranthus

Column B	
A.	Proteins
B.	Carbohydrates
C.	Vitamins
D.	Phosphorus
E.	Fats
F.	amylase

Key (answer)	1:B, 2:A, 3:D, 4:C
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DIT/ QS	Test Item Database Written (Theory) Test Item- no. 6		
Occupational Title:	Cattle 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:	August 2020		
Related module:	M 1.4		
Time allocation:	3 minutes		

Test item	Match the following items in Column A with Column B in relation to cattle feeding
------------------	---

Column A	
1.	Silage
2.	Style
3.	Hay
4.	Tick berry

Column B	
A.	Dry preserved fodder
B.	Poisonous plant to cattle
C.	Preserved fermented fodder
D.	Pasture legume
E.	Pasture grass
F.	Concentrate feed

Key (answer)	1:C 2:D 3:A 4:B
---------------------	-----------------

DIT/ QS	Test Item Database Written (Theory) Test Item- No. 7			
Occupational Title:	Cattle Farmer			
Competence level:	1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
			√	
Complexity level:	C 2			
Date of OP:	August 2020			
Related modules:	M 1.6			
Time allocation:	2 minutes			

Test Item	Arrange the following activities in the order of performance in milking a cow on the farm.
------------------	--

Column A (chronology)	Column B (work steps) in wrong chronological order	
1 st	A	Weigh milk
2 nd	B	Wear personnel protective gear
3 rd	C	Groom cow
4 th	D	Assemble cow
5 th	E	Testing mastitis
6 th	F	Massage udder
7 th	G	Assemble equipment and utensils
8 th	H	Restrain cow
9 th	I	Milk cow
10 th	J	Store milk

Key (answer)	1:D, 2:B, 3:G, 4:H, 5: C, 6:F, 7:E, 8:I, 9:A, 10:J
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PERFORMANCE TEST ITEMS (SAMPLES)

DIT/ QS	Test Item Database Performance Test Item- No. 8
Occupational Title:	Cattle Farmer
Competence level:	1
Code no.	
Test Item:	Milk a cow using manual milking method
Complexity level:	P 2
Date of OP:	August 2020
Related modules:	M1.6
Related skills and knowledge:	Hygiene requirements, milking tools and equipment-usage , cattle nutrition, diseases and their symptoms, first aid administration, milk storage techniques, cow breeds, cow behaviour, withdraw period, milk let down, milk holdup, health and safety precautions, hygiene and sanitation, waste management, cattle grooming techniques
Required tools, Materials and Equipment:	Milking can, weighing scale, lactometer, jerrycan, strip cup, towel, wheelbarrow, measuring cups, scrubbing brush, feed troughs, PPE, water troughs, spade, hoe, pail, milk strainer, rope, grooming brush, milking salve, water, disinfectants, dairy meal,
Time allocation:	2 hours
Preferred venue:	Milking parlour
Remarks for candidates	Observe health, safety and environmental precautions Provide personnel protective gear.
Remarks for assessors	Provide necessary tools, equipment and materials to candidate

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
1	Preparation for milking	Observed personal hygiene		2
		Wore protective gear: <ul style="list-style-type: none"> • Boots • Overall/overcoat • Gloves • Head gear • Nose mask 		1 1 1 1 1
		Cleaned milking parlour	2	
		No rubbish observed in the milking parlour and surrounding area		2
		Cleaned milking equipment and tools	2	
		No stains observed on equipment and tools		2
		Assembled milking utensils		1
		Groomed cow	1	
		Calm cow observed		2
		Restrained cow	2	
		Limited movement of the cow observed		2
		Served dairy meal	2	
		Dairy meal observed in food trough		2
		Trimmed hair around udder	2	
		No loose hair around the udder observed		2
2	Milking of the cow	Washed udder	2	
		No dirt on udder observed		2
		Warm water usage observed		1
		Massaged udder	1	
		Enlarged/Turbid teats observed		1
		Easy dripping of milk identified		1

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
		Applied milking salve	1	
		Even distribution of salve on teats observed		2
		Obtained 3 squirts from each teat into the strip cup	3	
		Checked for blood stains and clots	2	
		Ascertained milk fitness for consumption		3
		Milked the cow	3	
		No milk spillage observed		2
		No milk hold up observed		2
		Flabby udder after milking observed		3
		Released cow	1	
		Cow freely moved out of the parlour		2
		Measured milk quantity		2
		Recorded production		2
		3	Testing the milk quality	Strained milk
No foreign materials in the milk observed				2
Tested milk quality	2			
Lactometer used				2
Milk quality verified				1
4	Storage of milk	Poured milk in a can	2	
		No spillages observed		1
		Covered can with a lid	1	
		Lid tightly fitted observed		2
		Placed can in a clean cool dry store		2
5	Reassemble tools and equipment	Washed milking utensils	2	
		No dirt observed on utensils		2
		Stored utensils		1
		Cleaned milking parlour	2	

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
		No rubbish/dirt observed in the parlour		1
		Closed milking parlour		1
	TOTAL		34	55
			89	

DIT/ QS	Test Item Database Performance Test Item- No. 9
Occupational Title:	Cattle Farmer
Competence level:	1
Code no.	
Test Item:	a) Spray two animals (cattle) against external parasites using a bucket spray pump b) Administer oral dewormer to treat a calf with internal parasites
Complexity level:	P 2
Date of OP:	August 2020
Related modules:	M1.7 and M1.5
Related skills and knowledge:	Spraying schedules, mixing of chemicals, spraying skills, chemicals and drugs, cattle diseases and parasites, spraying methods, signs and symptoms of diseases and parasites, acaricides
Required tools, Materials and Equipment:	Bucket, spray pump, measuring cylinder, water, detergents, acaricides, drenching gun, de-wormer
Time allocation:	2 hours
Preferred venue:	Cattle Farm
Remarks for candidates	Health and safety precautions should be taken
Remarks for assessors	Provide necessary tools, equipment and materials to candidate

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
1	Preparation for task	<u>Wore protective gear:</u> <ul style="list-style-type: none"> • Boots • Overall • Eye shield • Gloves • Head gear • Nose mask 		1 1 1 1 1 1
		Cleaned work area	2	

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
		No rubbish observed in crush and surrounding area		2
		Arranged equipment, tools and materials	1	
		Equipment, tools and equipment arranged in order of use		2
		Assembled bucket spray pump	2	
		No leakage observed on the pump		2
		Assembled cattle in lairage	1	
		Limited movement of the cattle observed		2
		Provide drinking water to cattle	2	
		Water observed in trough		1
2	Preparation of acaricide mixture	Mixed acaricide and water according to manufacturers' instructions	3	
		Right acaricide to water ratio measured		2
		No spillage of acaricide observed		2
		First mixing acaricide with small amount of water (e.g. 1 litre) then topping to the mark observed		3
3	Spraying cattle	Drove cattle to crush	2	
		Cattle observed in crush		1
		Closed crush observed		2
		Sprayed cattle	3	
		Even distribution of spray chemicals on cattle body observed		4
		Left cattle for 3-5 minutes to drip dry before releasing them from crush	2	
		No dripping acaricide from cattle observed		2
4	Preparation for oral liquid De-wormer	Read manufacturer's instructions	2	
		Observance of manufacturer's instructions verified		3
		Loaded drenching gun with de-wormer	3	
		Correct dewormer dosage used		4

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
		No spillage of de-wormer observed		2
5	Administration of oral drug de-wormer	Restrained calf	2	
		Limited movement of calf observed		2
		Opened mouth of calf	2	
		Held calf's head in position	2	
		Inserted nozzle of drenching gun in calf's mouth from the side	2	
		Released de-wormer	2	
		Held head up to facilitate swallowing	2	
		No spillage of de-wormer from the calf's mouth observed		3
6	Performing post treatment tasks	Recorded treatment information	1	
		Cleaned crush		2
		Cleaned tools and equipment		1
		Stored unused materials		1
		Stored tools and equipment		1
		Removed protective gear		1
		Washed protective gear		1
			36	52
	MAX TOTAL		X/Y*100	88

4.0 ATP- PART IV

INFORMATION ON REVIEWED PROCESS

4.1 Occupational Profile Reviewed (August 2020)

The Occupational Profile was exclusively reviewed by job practitioners who were working in the Cattle Farmer occupation, Secondary school teachers who double as examiners of Agriculture with the Uganda National Examination Board (UNEB) and Curriculum Development Specialists working with the National Curriculum Development Centre (NCDC).

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 Review (August 2020)

Based on the Occupational Profile for a Cattle 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 a Cattle 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 review 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 review philosophy.

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

4.5 Reviewing Panel

The participating panel of Job Practitioners required for different stages of the assessment training package i.e., occupational profile, training modules, assessment instruments were constituted by members from the following organisations;

No.	Name	Institution/ Organisation
1.	Mr. Golomba Wilberforce	Tororo Girls School
2.	Mr. Wafula Moses	Kigulu College Namungalwe
3.	Mr. Ekwaro Benson	Kyambogo college
4.	Mr. Mutebi Mustafa	Local farmer
5.	Ms. Nalwanga Teopista	Majo Mixed Farm
6.	Dr Ashaba Denis	NARO Kachwekano
7.	Mr. Muhindi Paul	Sheema Integrated Community Development Organisation
8.	Mr. Kahangangire Valerian	Local farmer
9.	Ms NnyanziFlavia	NCDC Kyambogo
10.	Mr. Atuhaire Francis	Local farmer
11.	Mr. Sserwanga Joseph	Bukalasa Agricultural College

4.6 Facilitator team

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

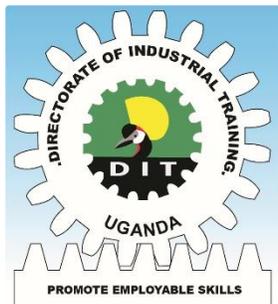
1. **Team Leader:** Ms. Mukyala Ruth, Ag Deputy Director, DIT
2. **Facilitators:** Ms. Safinah Nakyobe, PQO, DIT, Ahimbisibwe Judith, Atai Sarah and Asimwe Maureen QS DIT.
3. **Compiled by:** Mr. Benjamin Alex Kibira, and Ms. Asimwe Sarah Data Entrants, DIT and edited by Ms. Mukyala Ruth Ag. DD, DIT, Qualification Standards Dept. DIT
4. **Coordinated by:** Mr Byakatonda Patrick, Ag. Director, DIT;

4.7 Reference time:

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

References:

1. Introduction to animal husbandry in the Tropics by Williamson and Payne
2. Secondary agriculture Vol. 2 by Kato, Obwol and Benempaka
3. East African agriculture by Ngugi
4. Secondary Agriculture Bk. 3&4 MK Publishers
5. Principles and Practices of Agriculture: Animal production by ObwolEtal
6. O' level agriculture by Sakira
7. Practical guide: Calf rearing by John Moran
8. Principles and practices of Agriculture by Bainempaka and Etal Vol. I & II
9. Livestock husbandry in the tropics by Williamson and Payne
10. Calf rearing guide by S. J. Charlton
11. Vocational agriculture- Principles and practices by Kimbowa Joachim &Etal



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