REPUBLIC OF KENYA

NATIONAL OCCUPATIONAL STANDARDS

FOR

DAIRY FARM MANAGER

LEVEL 3

TVET CDACC
P.O. BOX 15745-00100
NAIROBI

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FOREWORD

The provision of quality education and training is fundamental to the Government's overall strategy for social economic development. Quality education and training will contribute to achievement of Kenya's development blueprint, Vision 2030 and sustainable development goals.

Reforms in the education sector are necessary for the achievement of Kenya Vision 2030 and meeting the provisions of the Constitution of Kenya 2010. The education sector had to be aligned to the Constitution of Kenya 2010 and this resulted to the formulation of the Policy Framework for Reforming Education and Training. A key feature of this policy is the radical change in the design and delivery of the TVET training. This policy document requires that training in TVET be competency based, curriculum development be industry led, certification be based on demonstration of competence and mode of delivery allows for multiple entry and exit in TVET programs.

These reforms demand that Industry takes a leading role in curriculum development to ensure the curriculum addresses its competence needs. It is against this background that these Occupational Standards were developed for the purpose of developing a competency-based curriculum for Dairy Farm Management. These Occupational Standards will also be the basis for assessment of an individual for competence certification.

It is my conviction that these Occupational Standards will play a great role towards development of competent human resource for the Agriculture sector's growth and sustainable development.

PRINCIPAL SECRETARY, VOCATIONAL AND TECHNICAL TRAINING
MINISTRY OF EDUCATION

PREFACE

Kenya Vision 2030 aims to transform the country into a newly industrializing, "middle-income country providing a high-quality life to all its citizens by the year 2030". Kenya intends to create a globally competitive and adaptive human resource base to meet the requirements of a rapidly industrializing economy through life-long education and training. TVET has a responsibility of facilitating the process of inculcating knowledge, skills and attitudes necessary for catapulting the nation to a globally competitive country, hence the paradigm shift to embrace Competency Based Education and Training (CBET).

The Technical and Vocational Education and Training Act No. 29 of 2013 on Reforming Education and Training in Kenya, emphasized the need to reform curriculum development, assessment and certification. This called for a shift to CBET in order to address the mismatch between skills acquired through training and skills needed by industry as well as increase the global competitiveness of Kenyan labor force.

TVET Curriculum Development, Assessment and Certification Council (TVET CDACC) in conjunction with Dairy Sector Skills Advisory Committee (SSAC), German International Cooperation and Ministry of Agriculture, Livestock and Fisheries have developed these Occupational Standards for Dairy Farm Manager. TVET CDACC in conjunction with Micro Enterprises Support Programme Trust (MESPT) have reviewed these Occupational Standards and incorporated Food Safety. These Standards will be the basis for development of competency-based curriculum for Dairy Farm Management level 3.

The Occupational Standards are designed and organized with clear performance criteria for each element of a unit of competency. These Standards also outline the required knowledge and skills as well as evidence guide.

I am grateful to the Council Members, Council Secretariat, Dairy SSAC, Food safety SSAC, expert workers and all those who participated in the development and review of these Occupational Standards.

CHAIRPERSON, TVET CDACC

ACKNOWLEDGMENT

These Occupational Standards were developed through combined effort of various stakeholders from private and public organizations. I am thankful to the management of these organizations for allowing their staff to participate in this course. I wish to acknowledge the invaluable contribution of industry players who provided inputs towards the development of these Standards.

I thank TVET Curriculum Development, Assessment and Certification Council (TVETCDACC) for providing guidance on the development of these Standards. My gratitude goes to Dairy and Food Safety Sector Skills Advisory Committee (SSAC) members for their contribution to the development of these Standards. I thank all the individuals and organizations who participated in the validation of these Standards.

My gratitude also goes to NEPAD Planning and Coordinating Agency (NPCA) of the Africa Union Commission and German Ministry of Economic Cooperation and Development (BMZ) through its implementing agency German International Cooperation (GIZ) GmbH which enabled the development of these Standards through the CAADP ATVET project.

I also appreciate the office of the National Coordinator of GIZ CAADP ATVET Project which was instrumental in the cooperation between the project team, Ministry of Agriculture, Livestock and Fisheries (MoALF) and Ministry of Education.

Much gratitude goes to Micro Enterprises Support Program Trust (MESPT) who initiated the review process and the incorporation of Food Safety in the Occupational Standards. I acknowledge the Danish International Development Agency (DANIDA) and the European Union (EU) who sponsored the review process.

I acknowledge all other institutions which in one way or another contributed to the development of these Standards.

CHAIRPERSON
DAIRY SECTOR SKILLS ADVISORY COMMITTEE

ACRONYMS

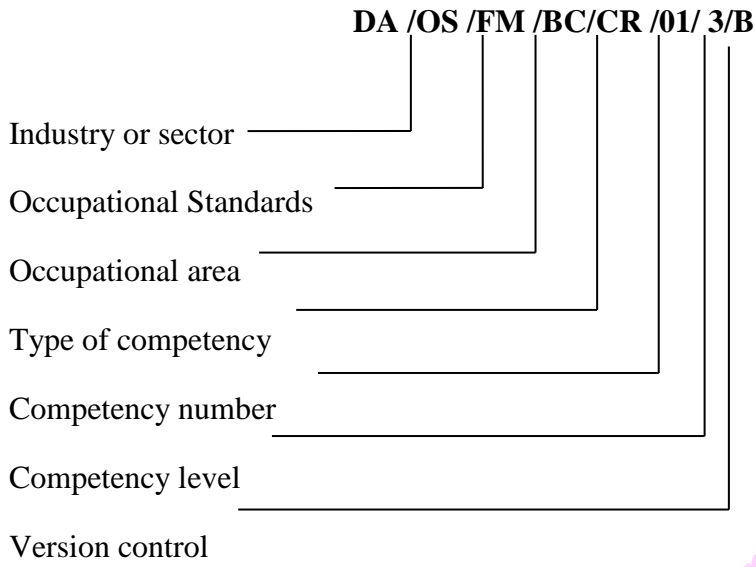|	
ATVET	Agricultural Technical and Vocational Education and Training
BC	Basic Competency
CAADP	Comprehensive Africa Agricultural Development Programme
CDACC	Curriculum Development, Assessment and Certification Council
CR	Core Competency
DA	Dairy
DANIDA	Danish International Development Agency
EMCA	Environment Management Coordination Act
GIZ	German International Cooperation
ICT	Information Communication Technology
MESPT	Micro Enterprises Support Programme Trust
OS	Occupational Standards
OSH	Occupation Safety and Health
OSHA	Occupation Safety and Health Act
OSHS	Occupational Safety and Health Standards
PPE	Personal Protective Equipment
SSAC	Sector Skills Advisory Committee
TVET	Technical and Vocational Education and Training

Contents

KEY TO UNIT CODE

DA /OS /FM /BC/CR /01/ 3/B

Industry or sector

Occupational Standards

Occupational area

Type of competency

Competency number

Competency level

Version control

OVERVIEW

Dairy Farm Manager Level 3 qualification consists of competencies that an individual must achieve to perform operations in a dairy farm. It entails participating in developing farm structures, producing dairy forage, breeding dairy animals, formulating dairy feed, feeding dairy animals, milking dairy animals, rearing young stock and maintaining herd health.

The qualification consists of the following basic and core competencies:

BASIC COMPETENCIES

UNIT CODE	UNIT NAME
DA/OS/FM/BC/01/3/B	Demonstrate communication skills
DA/OS/FM/BC/02/3/B	Demonstrate numeracy skills
DA/OS/FM/BC/03/3/B	Demonstrate digital literacy
DA/OS/FM/BC/04/3/B	Demonstrate entrepreneurial skills
DA/OS/FM/BC/05/3/B	Demonstrate employability skills
DA/OS/FM/BC/06/3/B	Demonstrate environmental literacy
DA/OS/FM/BC/07/3/B	Demonstrate occupational safety and health practices

CORE COMPETENCIES

UNIT CODE	UNIT NAME
DA/OS/FM/CR/01/3/B	Develop dairy farm structures
DA/OS/FM/CR/02/3/B	Produce dairy forage
DA/OS/FM/CR/03/3/B	Breed dairy animals
DA/OS/FM/CR/04/3/B	Formulate dairy feed
DA/OS/FM/CR/05/3/B	Feed dairy animals

DA/OS/FM/CR/06/3/B	Milk dairy animals
DA/OS/FM/CR/07/3/B	Rear dairy young stock
DA/OS/FM/CR/08/3/B	Maintain dairy herd health

BASIC UNITS OF COMPETENCY

DEMONSTRATE COMMUNICATION SKILLS

UNIT CODE: DA/OS/FM/BC/01/3/B
UNIT DESCRIPTION

This unit specifies the competencies required to demonstrate communication skills. It involves obtaining and conveying workplace information, speaking English at a basic operational level, participating in workplace meetings and discussions, and completing relevant work-related documents.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements. ***Bold and italicized terms are elaborated in the Range***
1. Obtain and convey workplace information	1.1 Specific and relevant information is accessed from ***appropriate sources*** based on standard procedures 1.2 Effective questioning, active listening and speaking skills are used to gather and convey information based on communication needs 1.3 Appropriate ***medium*** is used to transfer information and ideas in accordance with workplace guidelines 1.4 Appropriate non- verbal communication is used as per the communication needs 1.5 Appropriate lines of communication with supervisors and colleagues are identified and followed based on workplace requirements 1.6 Location and storage of information is undertaken according to workplace procedures 1.7 Personal interaction is carried out clearly and concisely according to workplace requirements
2. Speak English at a basic operational level	2.1 Participation in simple conversations with work colleagues is undertaken based on familiar topics 2.2 Simple verbal instructions and requests are responded to according to workplace guidelines

	2.3 **Routine procedures** are provided in accordance with workplace policy
	2.4 Likes, dislikes and preferences are expressed based on individual preference
	2.5 Different forms of expression in English are identified in line with workplace requirements
3. Participate in workplace meetings and discussions	3.1 Team meetings are attended on time according to schedules
	3.2 Own opinions are clearly expressed and those of others are listened to in accordance with workplace guidelines
	3.3 Meeting inputs are provided based on the meeting purpose and established **protocols**
	3.4 **Workplace interactions** are conducted as per organizations' code of conduct
	3.5 Work-related questions are asked and responded based on set protocols
	3.6 Meetings outcomes are interpreted and implemented as per organizations' objectives
4. Complete relevant work-related documents	4.1 Range of forms relating to conditions of employment are completed according to workplace procedures
	4.2 Workplace data is recorded based on workplace requirements
	4.3 Errors in recording information are identified and acted upon in accordance with workplace policies
	4.4 Reporting requirements are completed according to organizational guidelines

RANGE

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

Variable	Range
1. Appropriate Sources may include but not limited to:	• Various department heads, • organization documents

2. Medium may include but not limited to:	• Method of communication • Physical media • Mechanical media
3. Routine procedures may include but not limited to:	• Day to day activities
4. Protocols may include but not limited to:	• Procedures for doing a task
5. Workplace interactions may include but not limited to:	• Official inter relations

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required Skills

The individual needs to demonstrate the following skills:

- Analytical
- Active Listening
- Communication
- writing
- Interpretation
- Basic Information Technology (IT)

Required Knowledge

The individual needs to demonstrate knowledge of:

- Minutes writing
- Report writing

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Prepared written communication following standard format of the organization 1.2 Accessed information using communication equipment 1.3 Spoken English at a basic operational level 1.4 Made use of relevant terms as an aid to transfer information effectively 1.5 Conveyed information effectively adopting the formal or informal communication
2. Resource Implications	The following resources should be provided: 2. 1 Access to relevant workplace where assessment can take place 2. 2 Appropriately simulated environment where assessment can take place 2. 3 Materials relevant to the proposed activity or tasks
3. Methods of Assessment	Competency may be assessed through: 3.1 Direct Observation 3.2 Interview 3.3 Written test
4. Context of Assessment	Competency may be assessed: 4.1 On the job 4.2 Off the job 4.3 During industrial attachment
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

DEMONSTRATE NUMERACY SKILLS

UNIT CODE: DA/OS/FM/BC/02/3/B

UNIT DESCRIPTION:

This unit covers the competencies required to demonstrate numeracy skills. It involves using whole numbers and money up to one hundred thousand for work, Locating, comparing and using highly familiar measurement for work, using highly familiar maps and diagrams for work, identifying and using some common 2D shapes for work and locating specific information in highly familiar tables, graphs and charts for work

Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. ***Bold and italicized terms are elaborated in the Range***
1. Use whole numbers for work	1.1 Whole numbers and money amount up to 100,000 in highly familiar workplace documents and tasks are named and read according to workplace procedures. 1.2 Understanding of place value and the role of zero is demonstrate according to standard operating procedures. 1.3 Halves are recognised and understood in workplace as per Standard operating procedures. 1.4 Whole numbers and money amounting up to 100,000 are organised in size order and are compared as per workplace procedures. 1.5 Counting is done in numbers as per standard operating procedures. 1.6 Addition and subtraction of whole numbers and money up to 100,000 done in accordance with workplace requirement 1.7 Links between operations of addition and subtraction are clearly described as per job requirement. 1.8 Reasonableness of outcome with prompting and support is checked as per work requirement. 1.9 Numerical information is recorded, and the result of the task is communicated using informal language and symbolism as per workplace procedures.

Element	Performance Criteria
2. Locate, compare and use highly familiar measurement for work	2.1 Measurements in highly familiar workplace documents and tasks are located as per standard operating procedures 2.2 Different units of measurements and their uses are identified in accordance with job specifications 2.3 The comparative relationship between the units of measurement identified as per standard operating procedures. 2.4 Understanding of conversion of amounts is demonstrated in accordance with requirements. 2.5 Informal language is used to compare measurements as per workplace procedures. 2.6 Digital time is well read and am and pm used in reference to time 2.7 Calendar used appropriately to record information in accordance with organizational events. 2.8 Basic measurement information is well read and recorded as per the manuals 2.9 Additions and subtraction of simple quantities done in workplace as per SOPs.
3. Use highly familiar maps and diagrams for work	3.1 Familiar items or places are in highly familiar maps and diagrams in accordance with SOPs 3.2 Simple symbols and pictorial representations are identified in accordance with familiar maps and diagrams 3.3 Simple oral directions are given to locate objects as per SOPs 3.4 Simple oral directions followed to locate objects as per job specifications 3.5 Understanding of informal directional language is demonstrated as per work procedures.

Element	Performance Criteria
4. Identify and use some common 2D shapes for work	4.1 **Common two-dimensional shapes** are identified and named as per SOPs 4.2 Common objects are described in terms of size and shape as per SOPs 4.3 Common, every day, informal language is used to compare objects in accordance SOPs 4.4 Common objects are grouped based on shape, size, colour and features as per job requirements
5. Locate specific Information in highly familiar tables, graphs and charts for work	5.1 Features of simple tables identified as per work place procedures 5.2 Specific numerical information located in highly familiar tables using grid movement (up and down columns and across rows) and key as graph and chart manuals 5.3 Numerical information and data in highly familiar tables compared using appropriate informal language as per workplace procedures. 5.4 Information related to relevant workplace tasks as per workplace procedures 5.5 Features of simple graphs and charts identified as per SOPs 5.6 Specific numerical information located in highly familiar graphs and charts as per workplace procedures. 5.7 Numerical information and data compared using appropriate informal language as per SOPs.

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range
1. Common two - dimensional shapes: may include but not limited to:	• Round/circle • Square • Rectangular • Triangle

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required Skills

The individual needs to demonstrate the following skills:

- Measuring
- Logical thinking
- Computing
- Drawing of graphs
- Applying mathematical formulas
- Analytical

Required knowledge

The individual needs to demonstrate knowledge of:

- Types of common shapes
- Differentiation between two dimensional shapes / objects
- Formulae for calculating area and volume
- Types and purpose of measuring instruments
- Units of measurement and abbreviations
- Fundamental operations (addition, subtraction, division, multiplication)
- Rounding techniques
- Types of fractions
- Different types of tables and graphs
- Meaning of graphs, such as increasing, decreasing, and constant value
- Preparation of basic data, tables & graphs

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Measured objects or materials as per job requirements 1.2 Used calculator to perform the four fundamental operations 1.3 Performed calculations involving money up to one hundred thousand 1.4 Performed conversions between hours, minutes and seconds 1.5 Calculated area and volume of regular shapes 1.6 Created tables and graphs to represent and interpret information
2. Resource Implications for competence assessment	The following resources should be provided: 2.1 Access to relevant workplace where assessment can take place 2.2 Appropriately simulated environment where assessment can take place 2.3 Materials relevant to the proposed activity or tasks
3. Methods of Assessment	Competency may be assessed through: 3.1 Written Test 3.2 Interview 3.3 Oral Questioning 3.4 Demonstration
4. Context of Assessment	Competency may be assessed: 4.1 On the job 4.2 Off the job 4.3 During industrial attachment
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

DEMONSTRATE DIGITAL LITERACY

UNIT CODE: DA/OS/FM/BC/03/3/B

UNIT DESCRIPTION

This unit covers the competencies required to demonstrate digital literacy in a working environment. It entails identifying computer software and hardware, applying security measures to data, hardware, software, applying computer software in solving tasks and applying internet and email in communication at workplace.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements. ***Bold and italicized terms are elaborated in the Range***
1. Identify computer software and hardware	1.1 ***Computer software*** are identified according to manufacturer's specification 1.2 ***Appropriate computer hardware*** is identified according to manufacturer's specification
2. Apply security measures to data, hardware, software	2.1 ***Data security and privacy are classified*** in accordance with the technological situation 2.2 ***Security and control measures*** are applied in accordance with laws governing protection of ICT 2.3 Computer threats and crimes are detected in accordance with information management guidelines. 2.4 Protection against computer crimes is undertaken in accordance with laws governing protection of ICT
3. Apply computer software in solving tasks	3.1 Basic ***word processing concepts*** are applied in resolving workplace tasks as per job requirement. 3.2 ***Word processing utilities*** are applied in accordance with workplace procedures 3.3 Data is manipulated on worksheet in accordance with office procedures
4. Apply internet and email in	4.1 Electronic mail is applied in workplace communication in accordance with office procedures

| communication at workplace | 4.2 Office internet functions are defined and executed in accordance with office procedures |
| | 4.3 *Network configuration* and uses are determined in accordance with office operations procedures |

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range
1. Computer software may include but not limited to:	• Operating system • MS office • Web browser Media players
2. Computer hardware may include but not limited to:	• Computer Case • Monitor • Keyboard • Mouse • Hard Disk Drive • Motherboard • Video Card
3. Data security and privacy may include but not limited to:	• Confidentiality • Cloud computing • Confidentiality • Cyber terrorism • Integrity -but-curious data serving
4. Security and control measures may include but not limited to:	• Countermeasures and risk reduction • Cyber threat issues • Risk management
5. Word processing concepts may include but not limited to:	• Create • Edit • Print • Documents

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required Skills

The individual needs to demonstrate the following skills:

- Analytical skills
- Interpretation
- Typing
- Communication
- Computing skills
- Basic ICT skills

Required Knowledge

The individual needs to demonstrate knowledge of:

- Input and output devices
- Central processing Unit (CPU)
- Peripherals
- Storage Media
- Software concept
- Types of concept
- Function of computer software
- Data security and privacy
- Security threats and control measures
- Computer crimes
- Detection and protection of computer crimes
- Laws governing protection of ICT
- Word processing;
    - Functions and concepts of word processing.
    - Documents and tables creation and manipulations
    - Mail merging
    - Word processing utilities
- Spread sheet;

- Meaning, formulae, function and charts, uses, layout, data manipulation and application to cell
- Networking and Internet;
  - ✓ Meaning, functions and uses of networking and internet.
  - ✓ Electronic mail and world wide web
- Emerging trends and issues in ICT;
  - ✓ Identify and apply emerging trends and issues in ICT
  - ✓ Challenges posed by emerging trends and issues

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate:
	1.1 Identified input, output, CPU and storage media devices of computers in accordance to computer specification
	1.2 Identified concepts, types and functions of computer software according to operation manual
	1.3 Identified and controlled security threats
	1.4 Detected and protected computer crimes
	1.5 Applied word processing in office tasks
	1.6 Prepared work sheet and applied data to the cells in accordance to workplace procedures
	1.7 Used Electronic Mail for office communication as per workplace procedure
	1.8 Applied internet and World Wide Web for office tasks in accordance with office procedures
	1.9 Applied laws governing protection of ICT
2. Resource Implications for competence assessment	The following resources should be provided:
	2.1 Access to relevant workplace where assessment can take place
	2.2 Appropriately simulated environment where assessment can take place
	2.3 Materials relevant to the proposed activity or tasks
3. Methods of Assessment	Competency may be assessed through:
	3.1 Written Test
	3.2 Observation

		3.3 Practical assignment 3.4 Interview 3.5 Oral Questioning
4.	Context of Assessment	Competency may be assessed: 4.1 On the job 4.2 Off the job 4.3 During industrial attachment
5.	Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

DEMONSTRATE ENTREPRENEURIAL SKILLS

UNIT CODE : DA/OS/FM/BC/04/3/B

UNIT DESCRIPTION

This unit specifies the competencies required to demonstrate Entrepreneurial skills. It involves developing entrepreneurial culture, identifying entrepreneurial opportunities, starting, operating and growing a small business.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function.	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements. Bold and italicized terms are elaborated in the Range
1. Develop entrepreneurial culture	1.1 ***Entrepreneurship terminologies*** are defined following established procedures. 1.2 Contribution of entrepreneurship towards national development is identified in accordance to national development goals 1.3 Self-employment benefit are identified and emphasized to help create a positive attitude 1.4 Cultural factors that promote or inhibit entrepreneurial development are identified and emphasis made on entrepreneurial promotion 1.5 Ways of managing factors that inhibit development of entrepreneurial culture are identified in accordance with cultural background and national social economic situation
2. Identify entrepreneurial opportunities	2.1 Myths associated with entrepreneurship, types of entrepreneurs and characteristics of entrepreneurship are determined in accordance with the set procedures 2.2 Identification of ***sources of business ideas,*** generation of business ideas is undertaken in accordance with the existing procedure

	2.3 Evaluation of business opportunities is undertaken according to prevailing office procedures 2.4 Competencies are matched with business opportunities in accordance with business practices.
3. Start a small business	Factors to consider when starting a small business are identified according to business sector. 3.1 ***Forms of business ownership*** are identified and procedure of starting a small business stipulated according to relevant legal requirements 3.2 Procedure of starting a small business is identified as per the legal requirements 3.3 Challenges faced when starting a small business are identified and mitigating factors provided for in accordance prevailing legal and regulatory requirement 3.4 Resource requirement for a small business are specified according to nature of business 3.5 Business life cycle is projected as per the nature of business and national social economic situation
4. Operate a small business	4.1 Relevant terms are defined in accordance with the set rules 4.2 Small business record is maintained in accordance with office procedures 4.3 Business support services are set up in accordance with the nature and size of business 4.4 Marketing activities are effected according to the nature and size of business 4.5 Small enterprise business plan is prepared depending on the size and nature of business and the client specification 4.6 Small business resources are run for efficiency and profitability 4.7 Small business records are kept for decision making purposes 4.8 Word processing concepts are applied in the management of small business according to office procedures

		4.9 Basic computer application software and emerging trends and concerns are applied in small business management in accordance with office procedures
5. Grow a small business		5.1 Methods of growing/expanding a small business are identified and implemented in accordance with growth schedule
		5.2 Resources for growing small business are identified and implementing
		5.3 Small business growth plans are prepared according to growth schedule
		5.4 ICT and small business growth schedule is prepared in accordance with office procedures
		5.5 Use of computers and technology is incorporated in small scale business growth schedule in accordance with technological trends
		5.6 Social media is used for business growth and profitability
		5.7 Emerging issues and trends are considered in accordance with business growth schedule and activities
		5.8 Community interest is built in product/service according to growth plan
		5.9 Business communication is enhanced according to business communication plan and profitability
		5.10 Basic business growth strategies are identified and implemented for increased profitability
		5.11 Word processing concepts are applied in growing of small business according to office procedures
		5.12 Basic computer application software, programming and emerging trends and concerns are applied in small business growth in accordance with office procedures for growth and profitability

RANGE

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance

Variable	Range
1. Entrepreneurship terminologies include but not limited to:	• Intrapreneurship • Enterprise • Business vision. Mission, core values, objectives
2. Sources of business ideas may include but not limited to:	• Brainstorming • Personal hobbies • Newspapers, magazines, • Friends and relatives • Accounting/Administrative work • Modern trends and concerns
3. Forms of business ownership may include but not limited to:	• Sole proprietorship • Partnership • Limited Company • Unlimited Company

REQUIRED SKILLS AND KNOWLEDGE

Required Skills

This section describes the skills and knowledge required for this unit of competency.

The individual needs to demonstrate the following skills:

- Marketing skills
- Advertising
- Basic book-keeping
- accounting skills
- Communication skills

Required Knowledge

The individual needs to demonstrate knowledge of:

- Public relations concepts
- Basic product promotion strategies
- Basic market and feasibility studies
- Basic business ethics

- Building customer relations
- Business models and strategies
- Types and categories of businesses
- Business internal controls
- Relevant national and local legislation and regulations
- Basic quality control and assurance concepts
- Building relations with customer and employees
- Building competitive advantage of the enterprise

EVIDENCE GUIDE

This section describes the required skills which supports performance. These skills will need to be considered in the learning and assessment process.

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Demonstrated basic entrepreneurial skills 1.2 Demonstrated ability to conceptualize and plan a micro/small enterprise 1.3 Demonstrated ability to manage/operate a micro/small-scale business 1.4 Demonstrated basic marketing skills
2. Resource Implications for assessment	The following resources should be provided: 2. 1 Access to relevant workplace where assessment can take place 2. 2 Appropriately simulated environment where assessment can take place 2. 3 Materials relevant to the proposed activity or tasks
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Written tests 3.2 Oral Questioning 3.3 Observation 3.4 Third Party Report
4. Context of Assessment	Competency may be assessed: 4.1 On the job 4.2 Off the job 4.3 During industrial attachment
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

DEMONSTRATE EMPLOYABILITY SKILLS

UNIT CODE: DA/OS/FM/BC/05/3/B

UNIT DESCRIPTON

This unit covers competencies required to demonstrate employability skills. It involves conducting self-management, demonstrating critical safe work habits, demonstrating workplace learning and workplace ethics.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
These describe the key outcomes which make up workplace function.	These are assessable statements which specify the required level of performance for each of the elements. *Bold and italicized terms are elaborated in the Range*
1. Conduct self-management	1.1 Personal vision, mission and goals are formulated based on potential and in relation to organization objectives 1.2 Emotional intelligence is demonstrated as per workplace requirements. 1.3 Individual performance is evaluated according to the agreed targets. 1.4 Assertiveness is developed and maintained based on the requirements of the job. 1.5 Accountability and responsibility for own actions are demonstrated based on workplace instructions. 1.6 Self-esteem and a positive self-image are developed and maintained based on values. 1.7 Time management, attendance and punctuality are observed as per the organization policy. 1.8 Goals are managed as per the organization's objectives 1.9 Self-strengths and weaknesses are identified based on personal objectives

2. Demonstrate critical safe work habits	2.1.	Stress is managed in accordance with workplace policy.
	2.2.	Punctuality and time consciousness is demonstrated in line with workplace policy.
	2.3.	Personal objectives are integrated with organization goals based on organization's strategic plan.
	2.4.	***Resources*** are utilized in accordance with workplace policy.
	2.5.	Work priorities are set in accordance to workplace goals and objectives.
	2.6.	Leisure time is recognized and utilized in line with personal objectives.
	2.7.	***Drugs and substances of abuse*** are identified and avoided based on workplace policy.
	2.8.	HIV and AIDS prevention awareness is demonstrated in line with workplace policy.
	2.9.	Safety consciousness is demonstrated in the workplace based on organization safety policy.
	2.10.	***Emerging issues*** are identified and dealt with in accordance with organization policy.
3. Demonstrate workplace learning	3.1	Learning opportunities are sought and managed based on job requirement and organization policy.
	3.2	Improvement in performance is demonstrated based on courses attended.
	3.3	Application of learning is demonstrated in both technical and non-technical aspects based on requirements of the job
	3.4	Time and effort is invested in learning new skills based on job requirements
	3.5	Initiative is taken to create more effective and efficient processes and procedures in line with workplace policy.
	3.6	New systems are developed and maintained in accordance with the requirements of the job.
	3.7	Awareness of personal role in workplace ***innovation*** is demonstrated based on requirements of the job.
4. Demonstrate workplace ethics	4.1	Policies and guidelines are observed as per the workplace requirements

	4.2 Self-worth and professionalism is exercised in line with personal goals and organizational policies
	4.3 Code of conduct is observed as per the workplace requirements
	4.4 Integrity is demonstrated as per legal requirement

RANGE

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

Range	Variable
1. Drug and substance abuse may include but not limited to:	Commonly abused • Alcohol • Tobacco • Miraa • Over-the-counter drugs • Cocaine • Bhang • Glue
2. Feedback may include but not limited to:	• Verbal • Written • Informal • Formal
3. Team may include but not limited to:	• Small work group • Staff in a section/department • Inter-agency group
4. Innovation may include but not limited to:	• New ideas • Original ideas • Different ideas • Methods/procedures • Processes • New tools
5. Emerging issues may include but not limited to:	• Terrorism • Social media • National cohesion

	• Open offices

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit of competency.

Required Skills
The individual needs to demonstrate the following skills:
- Communication
- Critical thinking
- Observation
- Organizing
- Record keeping
- Problem solving
- Decision Making
- Resource utilization

Required Knowledge
The individual needs to demonstrate knowledge of:
- Work values and ethics
- Company policies
- Company operations, procedures and standards
- Occupational Health and safety procedures
- Fundamental rights at work
- Personal hygiene practices
- Workplace communication
- Concept of time
- Time management
- Decision making
- Types of resources
- Work planning
- Organizing work
- Record keeping
- Workplace problems and how to deal with them
- Assertiveness
- Team work

- HIV and AIDS
- Drug and substance abuse
- Safe work habits
- Professional growth and development
- Technology in the workplace
- Innovation
- Emerging issues
    - Social media
    - Terrorism
    - National cohesion

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Conducted self-management 1.2 Demonstrated critical safe work habits 1.3 Demonstrated workplace learning 1.4 Demonstrated workplace ethics
2. Resource Implications	The following resources should be provided: 2. 1 Access to relevant workplace where assessment can take place 2. 2 Appropriately simulated environment where assessment can take place
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Oral questioning 3.2 Portfolio of evidence 3.3 Third Party Reports 3.4 Written tests
4. Context of Assessment	Competency may be assessed: 4.1 On-the-job 4.2 Off-the –job 4.3 During Industrial attachment
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

DEMONSTRATE ENVIRONMENTAL LITERACY

UNIT CODE : DA/OS/FM/BC/06/3/B

UNIT DESCRIPTION

This unit specifies the competencies required to demonstrate environmental literacy. It involves controlling environmental hazard, controlling environmental pollution and demonstrating sustainable resource use.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
These describe the key outcomes which make up workplace function.	These are assessable statements which specify the required level of performance for each of the elements. *Bold and italicized terms are elaborated in the Range*
1. Control environmental hazard	1.1 Storage and handling methods for environmentally hazardous materials are strictly followed according to environmental regulations and OSHS. 1.2 Disposal methods of hazardous wastes are followed at all times according to environmental regulations and OSHS. 1.3 *PPE* is used according to OSHS.
2. Control environmental Pollution	2.1 *Environmental pollution control measures* are complied with following standard protocol. 2.2 Procedures for solid waste management are observed according Environmental Management and Coordination Act 1999 2.3 Methods for minimizing noise pollution complied following environmental regulations.
3. Demonstrate sustainable use of resource	3.1 Methods for minimizing wastage are complied with. 3.2 *Waste management procedures* are employed following principles of 3Rs (Reduce, Reuse, Recycle) 3.3 Methods for economizing or reducing *resource* consumption are practiced.

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range
1. PPE may include but not limited to:	• Mask • Gloves • Goggles • Safety hat • Overall • Hearing protector
2. Environmental pollution control measures may include but not limited to:	• Methods for minimizing or stopping spread and ingestion of airborne particles • Methods for minimizing or stopping spread and ingestion of gases and fumes • Methods for minimizing or stopping spread and ingestion of liquid wastes
3. Waste management procedures may include but not limited to:	• Sorting • Storing of items • Recycling of items • Disposal of items
4. Resources may include but not limited to:	• Electric • Water • Fuel • Telecommunications • Supplies • Materials
5. Workplace environmental hazards may include but not limited to:	• Biological hazards • Chemical and dust hazards • Physical hazards

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required Skills

The individual needs to demonstrate the following skills:

- Communication
- Observation
- Writing
- Analytical

Required Knowledge

The individual needs to demonstrate knowledge of:

- Storage methods of environmentally hazardous materials
- Disposal methods of hazardous wastes
- Usage of PPE Environmental regulations
- OSHS
- Types of pollution
- Environmental pollution control measures
- Different solid wastes
- Solid waste management
- Different noise pollution
- Methods of minimizing noise pollution
- Solid Waste Act
- Methods of minimizing wastage
- Waste management procedures
- Economizing of resource consumption
- Principle of 3Rs

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Controlled environmental hazard 1.2 Controlled environmental pollution

		1.3 Demonstrated sustainable resource use
2.	Resource Implications for assessment	The following resources should be provided: 2.1 Workplace with storage facilities 2.2 Tools, materials and equipment relevant to the tasks (ex. Cleaning tools, cleaning materials, trash bags, etc.) 2.3 PPE 2.4 Manuals and references
3	Methods of Assessment	Competency in this unit may be assessed through: 3.1 Observation 3.2 Oral questioning 3.3 Written examination
4	Context of Assessment	Competency may be assessed 4.1 On the job 4.2 Off the job 4.3 During industrial attachment
5	Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

DEMONSTRATE OCCUPATIONAL SAFETY AND HEALTH PRACTICES

UNIT CODE: DA/OS/FM/BC/07/3/B

UNIT DESCRIPTION

This unit specifies the competencies required to practice and promote safety and health at work. This entails preparing to practice safety and health at work and complying and promoting compliance of workers to organization's occupational safety and health instructions and requirements

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function.	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements. ***Bold and italicized terms are elaborated in the Range***
1. Prepare to practice safety and health at work	1.1 Awareness of legislation that outlines the minimum standards for occupational safety and health requirements/ regulations are emphasized 1.2 Benefits of implementing an occupational safety and health program are identified 1.3 ***Safety requirements/ regulations*** of own work and of other workers are familiarized 1.4 Workplace standards and procedures ***for incidents and Emergencies*** are determined 1.5 ***Prevention and control measures***, including use of ***safety gears/PPE*** (Personal Protective Equipment) to avoid accident, injuries and sickness are identified
2. Comply and promote compliance of workers to organization's occupational safety and	2.1 Safety instructions and safety signs are followed and disseminated to co-workers 2.2 Safe handling of tools, equipment and materials is

health instructions and requirements	learned and shared with co-workers
	2.3 Execution of own work and of co-workers is monitored in
	according to safe work procedures
	2.4 Use of safe guards and safety devices is monitored
	2.5 Hazards, incidents, injuries and sickness in the workplace are reported properly following standards and procedures

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range
1. *Safety requirements / regulations* may include but are not limited to:	- Building code - Permit to Operate - Occupational Safety and Health Standards
2. *Incidents and emergencies* may include but are not limited to:	- Chemical spills - Equipment/vehicle accidents - Explosion - Fire - Gas leak - Injury to personnel - Structural collapse - Toxic and/or flammable vapors emission.

3. *Prevention and control measures* may include but are not limited to:	• Eliminate the hazard • Isolate the hazard • Substitute the hazard with a safer alternative • Use administrative controls to reduce the risk • Use engineering controls to reduce the risk • Use personal protective equipment • Safety, Health and Work Environment Evaluation • Periodic and/or special medical examinations of workers
4. *Safety devices/ PPEs* (personal protective equipment) May include but are not limited to:	• Arm/Hand guard, gloves • Eye protection (goggles, shield) • Hearing protection (ear muffs, ear plugs) • Hair Net/cap/bonnet • Hard hat • Face protection (mask, shield) • Apron/Gown/coverall/jump suit • Anti-static suits • High-visibility reflective vest

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required Skills

The individual needs to demonstrate the following skills:

- Communication
- Observation
- Reporting
- Organizing

Required Knowledge

The individual needs to demonstrate knowledge of:

- Elements of an effective occupational safety and health program
- Benefits of implementing an occupational safety and health program
- Safety requirements of own work and of other workers
- Standard emergency plan and procedures in the workplace

- Different OSH control measures
- General OSH principles
- Work standards and procedures
- Safe handling procedures of tools, equipment's and materials
- Standard emergency plan and procedures in the workplace
- Different OSH control measures
- Standard accident and illness reporting procedures in the workplace
- Monitoring system on compliance to work safety and health

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1. Arranged work area and items in accordance with workplace procedures requirements 1.2. Followed work standards and procedures based on instructions 1.3. Applied *Prevention and control measures* based on instructions 1.4. Undertook orientations on *OSH requirements and regulations* in line with policy. 1.5. Provided feedback on occupational health and safety as per workplace instructions. 1.6. Adhered to workplace procedures for reporting hazards, incidents, injuries and sickness to as per workplace policy. 1.7. Identified and proposed *OSH-related training needs* as per workplace policy.
2. Resource Implications for assessment	The following resources should be provided: 2.1 Access to relevant workplace where assessment can take place 2.2 Appropriately simulated environment where assessment can take place
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Oral questioning

	3.2 Portfolio of evidence
	3.3 Third Party Reports
	3.4 Written tests
4. Context of Assessment	Competency may be assessed:
	4.1 On-the-job
	4.2 Off-the –job
	4.3 During Industrial attachment
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

CORE UNITS OF COMPETENCY

DEVELOP DAIRY FARM STRUCTURES

UNIT CODE: DA/OS/FM/CR/01/3/B

UNIT DESCRIPTION

This unit specifies the competencies required to develop dairy farm structures. It involves applying food safety measures while preparing construction materials and site; participating in construction and repair of dairy farm structures; and ensuring their cleanliness.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements. *Bold and italicized terms are elaborated in the Range*
1. Prepare to develop dairy farm structures	1.1 *Construction materials and supplies* are prepared in accordance with job requirements. 1.2 Site is cleared based on vegetation on the ground and soil type. 1.3 Tools and equipment are identified and gathered based on the requirements of the job. 1.4 PPEs are identified, gathered based on requirements of the job code of hygienic practices for milk and milk products. 1.5 Occupational safety and health procedures are adhered to according to work place procedures and public health act. 1.6 Environmental protection measures are observed according to *environment protection regulations* and work place procedures
2. Develop dairy farm structures	2.1 Development of dairy farm structures is carried out following work instructions based on the code of hygienic practices for milk and milk products and the code of practice for the animal feed industry 2.2 Structure layout is pegged as per approved design. 2.3 Foundation is laid based on the type of structure.

	2.4 Walls are erected based on the design and type of structure.
	2.5 Roof is laid based on the design and type of structure.
	2.6 Fittings are put in place based on design and type of structure.
3. Evaluate construction of dairy farm structures	3.1 Faults are detected, reported and repaired based on standard operating procedures.
	3.2 Dairy *farm structures* are cleaned as per the dairy structure cleaning and maintenance procedures based on the code of hygienic practices for milk and milk products and the code of practice for the animal feed industry
4. Complete dairy farm structures construction	4.1 Recyclable materials and supplies are stored as per standard operating procedures
	4.2 Non-recyclable materials and supplies are disposed-off according to work place policy.

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

Variable	Range	
1. *Dairy enterprise* includes but not limited to:	• Dairy cattle production • Dairy goat's production • Camel production • Donkey production • Pasture and fodder crop production	
2. *Construction materials* includes but not limited to	• Timber • Poles • Nails • Iron sheets • Barbed wire	• Stones • Gravel • Sand • Cement • Chain link
3. *Farm structures* includes but not limited to:	• Milking Parlor • Zero grazing unit • Holding crush • Hay barn • Fences	• Feeding troughs • Watering troughs • Spray race • Plunge dip • Feed formulation unit

		• Biogas plant
4. *Environment protection regulations* includes but not limited to:		• Public Health Act
		• EMCA 1999
		• OSH Act 2007

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required skills

The individual needs to demonstrate the following skills:

- Measuring skills
- Masonry skills
- Carpentry skills
- Communication skills

Required knowledge

The individual needs to demonstrate knowledge of:

- Dairy enterprises
- Types of dairy farm structures
- Types of construction materials
- Dairy structure maintenance requirements
- Code of hygienic practices for milk and milk products
- Code of practice for the animal feed industry
- Waste disposal
- Cleaning and maintenance of farm structures
- Occupational safety and health regulations

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate:
	1.1 Applied food safety measures to develop dairy farm structures
	1.2 Identified and donned correct PPEs
	1.3 Pegged structure layout accurately
	1.4 Mixed construction materials in the recommended ratio
	1.5 Observed occupational safety and health measures in the working environment
	1.6 Observed laid down environmental protection measures at the work place
	1.7 Documented dairy farm structures development and food safety records
2. Resource Implications	The following resources **MUST** be provided:
	2.1 Assessment location / workplace
	2.2 Personal Protective Equipment and Apparel
3. Methods of Assessment	Competency may be assessed through:
	3.1 Observation
	3.2 Oral questioning
	3.3 Written test
	3.4 Portfolio of Evidence
	3.5 Interview
	3.6 Third party report
4. Context of Assessment	Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended.

PRODUCE DAIRY FORAGE

UNIT CODE: DA/OS/FM/CR/02/3/B

UNIT DESCRIPTION

This unit specifies the competencies required to produce dairy forage. It involves Applying food safety measures while participation in land preparation; soil fertility maintenance; and forage establishment, management, conservation and storage.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements. ***Bold and italicized terms are elaborated in the Range***
1. Prepare to produce dairy forage	1.1 ***Forage*** planting land is prepared using correct ***farm tools, implements and machinery*** in accordance with the planting material 1.2 Soil for analysis is collected as per as per sampling procedure 1.3 ***Safe Planting materials*** are prepared according to Good Agricultural Practices (GAP) and work place policy. 1.7 Soil erosion is controlled based on topography, soil type and level of degradation. 1.8 PPEs are identified and gathered as per work instructions based on the code of practice for milk and milk products, code of practice for animal feed industry and public health regulations. 1.9 Occupational safety and health procedures are adhered to according to work place procedures and public health regulations. 1.10 Environmental protection measures are observed according to ***environment protection regulations*** and work place procedures
2. Produce dairy forage	2.1 Forage materials are planted as per GAP and livestock production manual

	2.2 Planted materials are gapped as per spacing requirements
	2.3 Weeds in forage are controlled as per GAP based on the pest control products act (Cap 346)
	2.4 Pests and diseases in forage are controlled following GAP regulations based on the pest control products act (Cap 346)
	2.5 Planted forage is fertilized and irrigated as per soil conditions and livestock production manual based on fertilizer application standards, fertilizer and animal foodstuffs Act (Cap345) and guidelines for treated waste water used for irrigation.
	2.6 Dairy forage is harvested in accordance with the livestock production manual
3. Evaluate forage produced	3.1 Quantity and safety of forage produced is determined based on livestock production manual and farm production projections
	3.2 Errors are detected and reported based on workplace policy
4.Complete dairy forage production	4.1 Dairy forage is conserved as per forage type and work instructions based on the code of practice for the animal feed industry and livestock production manual.
	4.2 Dairy forage is stored as per type of conserved forage and work instructions based on the code of practice for the animal feed industry and livestock production manual.
	4.3 Surplus materials and supplies are stored as per manufacturer's instructions and the code of practice for the animal feed industry.
	4.4 Waste is disposed of with due regard to work place policy and environmental protection regulations

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

Variable	Range		
1. Forage includes but not limited to	• Pastures - Kikuyu, Rhodes, Star grass, Nandi Seteria • Fodder crops - Maize, Lucerne, Napier, Disodium, Vetch, multi-purpose trees		
2. Farm tools includes but not limited to:	• Hoe • Fork • Slasher	• Sickle • Rake	
3. Farm machinery includes but not limited to:	• Tractor • Lorry • Pickup		
4. Farm implements includes but not limited to:	• Trailer • Plough • Harrow • Tiller • Planter • Sprayer	• Mower • Tedder • Rake • Baler • Forage harvester	
5. Safe Planting materials includes but not limited to	Certified, clean and disease free • Seeds • Seedlings • Cuttings • Splits • Tubers for propagation		
6. Environment protection regulations includes but not limited to:	• Public Health Act • EMCA 1999 • OSH Act 2007		

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required skills

The individual needs to demonstrate the following skills:

- Measuring skills
- Agronomic skills
- Communication skills

Required knowledge

The individual needs to demonstrate knowledge of:
- Types of planting materials
- Primary and secondary cultivation methods
- Soil erosion control methods
- Practices of forage establishment and management
  - Methods of planting
  - Weeds, pests and diseases control methods
  - Irrigation methods
- Fertilizer application methods
- Codes of hygienic practice (s)
- Forage harvesting and conservation methods
- Occupational safety and health procedures

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate:
	1.1 Applied food safety measures to produce dairy forage
	1.2 Prepared planting land to a level suitable to the planting material
	1.3 Managed and harvested forage according to guidelines in the livestock production manual and the code of practice for the animal feed industry
	1.4 Conserved and stored fodder using correct method and procedures and the code of practice for the animal feed industry
	1.5 Adhered to occupational safety and health procedures as per OS&H regulations and farm procedures

	1.6 Observed laid down environmental protection measures at the work place
	1.7 Documented dairy forage production and food safety records
2. Resource Implications	The following resources must be provided:
	2.1 Assessment location / workplace
	2.2 Personal Protective Equipment and Apparel
3. Methods of Assessment	Competency may be assessed through:
	3.1 Observation
	3.2 Oral questioning
	3.3 Written test
	3.4 Portfolio of Evidence
	3.5 Interview
	3.6 Third party report
4. Context of Assessment	Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended.

BREED DAIRY ANIMALS

UNIT CODE: DA/OS/FM/CR/03/3/B

UNIT DESCRIPTION

This unit specifies the competencies required to breed dairy animals. It involves applying food safety measures while participating in dairy animal identification, heat detection, parturition handling and restraining dairy animals.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements. *Bold and italicized terms are elaborated in the Range*
1. Prepare to breed dairy animals	1.1 Breeding management *tools, equipment, materials* and *supplies* are identified and assembled based on breeding activity, livestock species in accordance with the livestock production manual 1.2 Personal Protection Equipment and Apparel are identified and gathered based on job requirements 1.3 Dairy animals are *Identified* in accordance with the Livestock Production Manual (LPM), animal welfare regulations and the code of practice for milk and milk products 1.4 Occupational safety and health procedures are adhered to according to work place procedures 1.5 Environmental protection measures are observed according to *environment protection regulations* and work place procedures
2. Breed dairy animals	2.1 Female animals on heat are detected based on LPM 2.2 Dairy animals are restrained according to animal welfare regulations and work place policy. 2.3 Parturiting animals are provided care based on the LPM
3. Evaluate dairy breeding	3.1 Detect repeat breeders based on frequency of heat 3.2 Errors are detected and reported as per workplace policy.

4. Complete dairy animal breeding	4.1 Surplus Materials and supplies are stored as per manufacturer's instructions.
	4.2 Waste is managed and disposed off in due regard to work place policy.

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

Variable	Range
1. Tools and equipment includes but not limited to:	Tools and equipment required for: • Identification • Castration • Handling parturition • Weighing • Artificial insemination
2. Materials and supplies includes but not limited to:	Supplies and materials required for: • Cleaning • Disinfection • Artificial Insemination • Identification
3. Identified includes but is not limited to:	Marking or placing gadgets on animals that distinguish individual animals by: • Ear tagging • Tattooing • Ear Notching • Electronic transponders • Branding
4. Served	• Use of natural (bull, buck) • Artificial (insemination) • Embryo Transfer
5. Environment protection regulations includes but not limited to:	• Public Health Act • EMCA 1999 • OSH Act 2007

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required skills

The individual needs to demonstrate the following skills:
- Animal handling
- Data recording
- Heat detection

Required knowledge

The individual needs to demonstrate knowledge of:
- Methods of animal identification
- Heat signs
- Parturition process
- Transmission of breeding diseases
- Artificial insemination requirements
- Waste management and disposal methods

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate:
	1.1 Applied food safety measures to breed dairy animals
	1.2 Assigned identification marks for dairy animals following recommended procedures in the livestock breeding manual
	1.3 Identified the correct time of oestrus to serve dairy animals
	1.4 Identified parturating animals in need of assistance
	1.5 Notified farm authorities on dystocia cases in need of vet attention
	1.6 Restrained dairy animals as per animal welfare requirements
	1.7 Observed occupational safety and health measures in the working environment
	1.8 Observed laid down environmental protection measures at the work place

	1.9 Documented dairy animal breeding and food safety records
2. Resource Implications	The following resources must be provided: 2.1 Assessment location / workplace 2.2 Personal Protective Equipment and Apparel
3. Methods of Assessment	Competency may be assessed through: 3.1 Observation 3.2 Oral questioning 3.3 Written test 3.4 Portfolio of Evidence 3.5 Interview 3.6 Third party report
4. Context of Assessment	Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended.

FORMULATE DAIRY FEED

UNIT CODE: DA/OS/FM/CR/04/3/B

UNIT DESCRIPTION

This unit specifies the competencies required to formulate dairy feed. It involves applying food safety measures while participating in collection of feed ingredient and ration samples; processing and mixing feed ingredients; and ration packaging and storage.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements. *Bold and italicized terms are elaborated in the Range*
1. Prepare to formulate dairy feed	1.1 Feed formulation *tools, equipment, materials* and *supplies* are identified and assembled as per the work instructions based on the feed formulation manual, the code of practice for the animal feed industry and feed standards. 1.2 Personal Protection Equipment and Apparel are identified and gathered based on job requirements and the code of hygiene practice for milk and milk products. 1.3 Feed formulation *ingredients* are assembled based on feed formulae 1.4 Ingredients samples are collected according to *sampling procedures* 1.5 Packaging materials are labeled as per *feed manufacturing guidelines* 1.6 Occupational safety and health procedures are adhered to according to work place procedures and Public Health Act Cap 254. 1.7 Environmental protection measures are observed according to *environment protection regulations* and work place procedures
2. Formulate dairy feed	2.1 Feed ingredients are prepared and processed according to feed manufacturing guidelines and the code of practice for the animal feed industry.

	2.2 Prepared feed ingredients are mixed as per feed manufacturing guidelines and the code of practice for the animal feed industry
	2.3 Mixed rations are packaged as per feed manufacturing guidelines and the code of practice for the animal feed industry
	2.4 Feed is stored in accordance with animal feed manufacturing guidelines and the code of practice for the animal feed industry
3. Evaluate dairy feed formulation	3.1 Mixed ration samples are collected according to sampling procedures
	3.2 Errors are detected and reported based on workplace policy.
4. Complete dairy feed formulation	4.1 Feed handling equipment and structures are cleaned in accordance with good manufacturing practices, work place policy and the code of practice for the animal feed industry.
	4.2 Reusable materials and supplies are stored based on the manufacturer's instructions and the code of practice for the animal feed industry
	4.3 Non-recyclable waste materials are disposed off in due regard to work place policy.

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

Variable	Range
1. Tools and equipment includes but not limited to	Tools and equipment required for: • Feed sampling • Feed processing • Feed mixing • Packaging and labelling • Weighing
2. Materials and supplies	Supplies and materials required for: • Packaging • Cleaning

includes but not limited to	
3. Ingredients includes but not limited to	• Feedstuff • Additives
4. Sampling procedures includes but not limited to	• Random sampling • Systematic sampling • Purposive sampling
5. Feed manufacturing guidelines includes but not limited to	Animal feed regulatory authority's specifications on; • Manufacturing procedures • Nutrient content • Processing procedures • Mixing procedures • Ingredient inclusion levels • Labeling • Storage
6. Environment protection regulations includes but not limited to:	• Public Health Act • EMCA 1999 • OSH Act 2007

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit of competency.

Required skills
The individual needs to demonstrate the following skills:
• Manual mixing skills
• Feed processing and mixing machine operation skills

Required knowledge
The individual needs to demonstrate knowledge of:
• Types of feeds and feedstuff
• Animal feed processing procedures
• Feed mixing methods
• Importance of food safety

- Relevant standards and regulations in the animal feed industry
- Occupational safety and health regulations

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Applied food safety measures to formulate dairy feed 1.2 Prepared and processed feedstuff in correct form of presentation 1.3 Thoroughly mixed feed ingredients 1.4 Packaged and stored feed as recommended 1.5 Labeled feed packages correctly 1.6 Adhered to occupational safety and health procedures 1.7 Observed laid down environmental protection measures at the work place 1.8 Documented dairy feed formulation and food safety records
2. Resource Implications	The following resources must be provided: 2.1 Assessment location / workplace 2.2 Personal Protective Equipment and Apparel
3. Methods of Assessment	Competency may be assessed through: 3.1 Observation 3.2 Oral questioning 3.3 Written test 3.4 Portfolio of Evidence 3.5 Interview 3.6 Third party report
4. Context of Assessment	Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended.

FEED DAIRY ANIMALS

UNIT CODE: DA/OS/FM/CR/05/3/B

UNIT DESCRIPTION

This unit specifies the competencies required to feed dairy animals. It involves applying food safety measures while participating in separating dairy animals into different classes, feedstuff preparation, ration mixing and dispensing rations into feeding troughs.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements. *Bold and italicized terms are elaborated in the Range*
1. Prepare to feed dairy animals	1.1 *Dairy animals* are grouped based on their nutritional requirements age, sex and physiological status. 1.2 *Feed materials and supplies* are assembled as per nutritional requirements and work place procedures based on the *standards for dairy animal feeds*. 1.3 Required *tools* and *equipment* are identified and gathered based the requirements of the job. 1.4 PPEs are identified and gathered based on requirements of the job. 1.5 Occupational safety and health procedures are adhered to according to work place procedures 1.6 Environmental protection measures are observed according to *environment protection regulations* and work place procedures
2. Feed dairy animals	2.1 Feed ingredients are processed in accordance with the livestock production manual, feeding system based on the code of practice for the animal feed industry. 2.2 Rations for different dairy classes are mixed as per the nutritional requirements of the animal in accordance with the code of practice for the animal feed industry and the dairy animal feed standards 2.3 Dairy animals are fed based on their nutritional requirements, in accordance with dairy feeding manual.

2	Evaluate dairy animal feeding	3.1 Feed ingredients and rations samples are collected based on sampling procedures
		3.2 Faults are reported based on workplace policy and LPM
4	Complete dairy animal feeding	4.1 Surplus materials and supplies not consumed are stored as per manufacturer's instructions and the code of practice for the animal feed industry
		4.2 Recyclable and non-recyclable materials are disposed-off based on type with regard to work place policy.

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

Variable	Range
1. Dairy animals includes but not limited to:	• Dairy cattle • Dairy goats • Camels
2. Standards for dairy animal feeds includes but not limited to:	• Dairy cattle feed supplements - specification • Dairy cattle feed premix – specification • Compounded dairy cattle feeds – specification • Compounded dairy goats feeds – specification • Code of practise for the reduction of aflatoxin B1 in raw materials and supplemental feeding stuffs for milk producing animals
3. Feed materials and supplies includes but not limited to:	• Napier grass • Dairy meal • Fodder maize • Hay • Lucerne • Silage • Salt lick • Feed additives
4. Environment protection regulations includes but not limited to:	• Public Health Act • EMCA 1999 • OSH Act 2007

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required skills

The individual needs to demonstrate the following skills:

- Weighing
- Animal handling
- Manual feed mixing
- Feed mill and mixer operations

Required knowledge

The individual needs to demonstrate knowledge of:

- Basic dairy animal behaviour
- Types of feed and feedstuff
- Basic nutritional composition of feed materials

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate:
	1.1 Applied food safety measures to feed dairy animals
	1.2 Grouped dairy animals into classes correctly
	1.3 Provided required quality and quantity of feed ration to meet animal's daily requirements
	1.4 Observed occupational safety and health measures in the working environment
	1.5 Observed laid down environmental protection measures at the work place
	1.6 Documented dairy animal feeding and food safety records
2. Resource Implications	The following resources must be provided:
	2.1 Assessment location / workplace
	2.2 Personal Protective Equipment and Apparel
3. Methods of Assessment	Competency may be assessed through:
	3.1 Observation
	3.2 Oral questioning
	3.3 Written test
	3.4 Portfolio of Evidence
	3.5 Interview

		3.6 Third party report
4.	Context of Assessment	Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.
5.	Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended.

MILK DAIRY ANIMALS

UNIT CODE: DA/OS/FM/CR/06/3/B

UNIT DESCRIPTION
This unit specifies the competencies required to milk dairy animals. It involves applying food safety measures while carrying out pre- milking preparations; actual milking; post milking activities; and recording of milk production.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements. *Bold and italicized terms are elaborated in the Range*
1. Prepare to milk dairy animals	1.2 *Milking tools and equipment* are assembled based on the milking method and species of dairy animal and the code of hygienic practice for milk and milk products. 1.3 *Milking materials* and *supplies* are assembled based on the milking method and the code of hygienic practice for milk and milk products. 1.4 *Milking animals* are assembled in accordance with livestock production manual. 1.5 PPEs are identified and gathered based on requirements of the job and the code of hygienic practice for milk and milk products. 1.6 Occupational safety and health procedures are adhered to according to work place procedures as per the regulations of the public health, occupational health and safety. 1.7 Environmental protection measures are observed according to *environment protection regulations* and work place procedures
2. Milk dairy animals	2.1 Milking animals are restrained according to animal welfare regulations 2.2 Udder is prepared according to the livestock production manual and the code of hygienic practice for milk and milk products.

		2.3 Milking animals are tested for mastitis infection according to the livestock production manual the code of hygienic practice for milk and milk products
		2.4 Milking animals are milked based on method of milking as per livestock production manual and the code of hygienic practice for milk and milk products.
		2.5 Milked animal's udder quarters are disinfected as per livestock production manual and the code of hygienic practice for milk and milk products
		2.6 Milk is weighed and sieved in accordance with livestock production manual the code of hygienic practice for milk and milk products.
		2.7 Milk is stored and cooled based on livestock production manual and the code of hygienic practice for milk and milk products.
3.	Evaluate dairy animal milking	3.1 Average time taken to milk is observed based on livestock production manual.
		3.2 Cleanliness of milk, milking parlor and equipment is checked based on workplace policy and the code of hygienic practice for milk and milk products.
4.	Complete dairy animal milking	4.1 Milking is recorded according to livestock production manual and work place policy
		4.2 Milking equipment are cleaned and stored as per cleaning standard operating procedures and the code of hygienic practice for milk and milk products
		4.3 Milking parlour is cleaned as per livestock production manual, workplace policy and the code of hygienic practice for milk and milk products
		4.4 Reusable materials and supplies are stored as per manufacturer's instructions manual, workplace policy and the code of hygienic practice for milk and milk products.
		4.5 Waste is disposed off in regard to environment protection regulations and the code of hygienic practice for milk and milk products.

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

Variable	Range
1. Milking tools and equipment includes but not limited to:	• Milking buckets • Sieve • Cans • Mastitis test kit • Strip cup • Teat dip cup • Portable milking machine
2. Milking materials and supplies includes but not limited to	• Milking salve • Udder clothes • Mastitis testing reagents • Teat dip solution • Restraining rope
3. Milking animals includes but not limited to:	Lactating; • Dairy cattle • Dairy goats • Camels
4. Environment protection regulations includes but not limited to:	• Public Health Act • EMCA 1999 • OSH Act 2007

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required skills

The individual needs to demonstrate the following skills:
- Weighing
- Animal handling
- Milking
- Cleaning
- Communication

- Milking machine operation

Required knowledge

The individual needs to demonstrate knowledge of:
- Methods of milking
- Basic animal behaviour
- Hygienic milk production
- Udder health
- Code of hygienic practice for milk and milk products
- Mastitis management
- Types of disinfectants
- Milking machine operation
- Milk spoilage
- Animal welfare
- Occupational safety and health regulations
- Milk recording

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate:
	1.1 food safety measures to milk dairy animals
	1.2 Restrained the milking animal
	1.3 Tested milking animal for mastitis before milking
	1.4 Used correct milking techniques
	1.5 Operated milking machine in accordance with user's manual
	1.6 Disinfected udder after milking
	1.7 Recorded milk production
	1.8 Adhered to occupational safety and health procedures
	1.9 Observed laid down environmental protection measures at the work place
	1.10 Documented milk production and food safety records
2. Resource Implications	The following resources must be provided:
	2.1 Assessment location / workplace
	2.2 Personal Protective Equipment and Apparel

3.	Methods of Assessment	Competency may be assessed through:
		3.1 Observation
		3.2 Oral questioning
		3.3 Written test
		3.4 Portfolio of Evidence
		3.5 Interview
		3.6 Third party report
4.	Context of Assessment	Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.
5.	Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended.

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REAR DAIRY YOUNG STOCK

UNIT CODE: DA/OS/FM/CR/07/3/B

UNIT DESCRIPTION

This unit specifies the competencies required to rear dairy young stock. It involves applying food safety measures while participating in steaming up of dams; care of neonates; and feeding, identification, housing, weighing, weaning and restraining young stock.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements. ***Bold and italicized terms are elaborated in the Range***
1. Prepare to rear dairy young stock	1.1 ***Young stock*** management ***tools, equipment, materials*** and ***supplies*** are identified and assembled based on livestock species in accordance with the livestock production manual
	1.2 Structures for managing young stock are identified and prepared in accordance with the livestock production manual
	1.3 Personal Protection Equipment and Apparel (PPE) are identified and gathered based on job requirements
	1.4 Additional nutrition is provided to dams within the last trimester of gestation according to livestock production manual (LPM)
	1.5 Female animals showing signs of imminent parturition are identified and separated according to the livestock production manual
	1.6 Dams with difficult parturition are identified and assisted according to the livestock production manual
	1.7 Occupational safety and health procedures are adhered to according to work place procedures
	1.8 Environmental protection measures are observed according to ***environment protection regulations*** and work place procedures

2. Rear dairy young stock	2.1 *Neonates* are handled at birth according to instructions in the LPM
	2.2 Neonate is fed adequate amounts of colostrum according to the LPM
	2.3 Orphaned neonates are foster-fed according to the LPM
	2.4 Young stock are *identified* using suitable method in accordance with LPM, animal welfare regulations and work place policy
	2.5 Young stock are housed based on production system, prevailing climatic conditions and age within LPM standards
	2.6 Young stock are introduced to roughage feeding in accordance with LPM
	2.7 Young stock are restrained according to animal welfare regulations and work place policy
	2.8 Young stock *health care* is provided based on identified animal health risk.
3. Evaluate rearing of dairy young stock	3.1 Young stock is weighed in accordance with LPM instructions and work place policy
	3.2 Dams with dystocia in need of vet attention are identified and reported according to the livestock production manual
4. Complete rearing of dairy young stock	4.1 Young stock are weaned in accordance with the LPM
	4.2 Calf pens are cleaned and bedding changed as per livestock production manual and workplace policy.
	4.3 Reusable materials and supplies are stored as per manufacturer's instructions manual and workplace policy.
	4.4 Waste is disposed off with regard to workplace policy.

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

Variable	Range
1. Young Stock includes but not limited to:	Offspring of the following between birth and weaning: • Cattle • Goats • Camels
2. Tools and equipment includes but not limited to:	Tools and equipment required for: • Identification • Castration • Disbudding / dehorning • Hoof trimming • Young stock handling • Weighing
3. Materials and supplies includes but not limited to:	• Feed – artificial colostrum ingredients, milk replacers, pellets, pencils, mineral supplements • Dewormers • Cleaning materials
4. Environment protection regulations includes but not limited to:	• Public Health Act • EMCA 1999 • OSH Act 2007
5. Neonates includes but not limited to:	The young ones at birth of the following: • Cattle • Goats • Camels
6. Identified includes but not limited to:	Markings or gadgets on animals for purposes of distinguishing individual animals: • Ear tagging • Tattooing • Ear Notching • Electronic transponders • Branding
7. Health care includes but not limited	• Implement vaccination programmes against endemic diseases • Endo and Ecto - parasite control • Quarantining • Disease notification

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required skills

The individual needs to demonstrate the following skills:
- Animal handling
- Farm equipment operation skills

Required knowledge

The individual needs to demonstrate knowledge of:
- Young stock feeding requirements
- Foster feeding
- Parturition signs
- Methods of animal identification
- Animal welfare
- Weaning process

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate:
	1.1 Applied food safety measures to rear dairy young stock
	1.2 Identified and separated females showing signs of imminent parturition
	1.3 Identified females requiring assistance to parturite
	1.4 Implemented recommended young stock feeding regime
	1.5 Weaned young stock using right procedure at correct age and body weight
	1.6 Observed occupational safety and health measures in the working environment
	1.7 Observed laid down environmental protection measures at the work place
	1.8 Documented dairy young stock rearing and food safety records

2.	Resource Implications	The following resources must be provided: 2.1 Assessment location / workplace 2.2 Personal Protective Equipment and Apparel
3.	Methods of Assessment	Competency may be assessed through: 3.1 Observation 3.2 Oral questioning 3.3 Written test 3.4 Portfolio of Evidence 3.5 Interview 3.6 Third party report
4.	Context of Assessment	Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.
5.	Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended.

MAINTAINDAIRY HERD HEALTH

UNIT CODE: DA/OS/FM/CR/08/3/B

UNIT DESCRIPTION

This unit specifies the competencies required to maintain dairy herd health. It involves applying food safety measures while participating in implementation of farm biosecurity, external parasite control, hoof trimming, animal grooming and restraining.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements. *Bold and italicized terms are elaborated in the Range*
1. Prepare to maintain dairy herd health	1.1 Herd health management *tools, equipment, materials* and *supplies* are identified and assembled based on livestock species in accordance with the livestock production manual 1.2 Structures for herd health management are identified and prepared in accordance with the livestock production manual and code of hygienic practices for milk and milk products 1.3 Personal Protection Equipment and Apparel are identified, gathered based on job requirements code of hygienic practices for milk and milk products 1.4 Occupational safety and health procedures are adhered to according to work place procedures 1.5 Environmental protection measures are observed according to *environment protection regulations* and work place procedures
2. Maintain dairy herd health	2.1 *Biosecurity measures* are implemented based on design in accordance with work place policy and Animal Disease Act (Cap 364) 2.2 External parasites are controlled in dairy herds in accordance with the livestock production manual (LPM)and Animal Disease Act (Cap 364)

		2.3 Animals showing signs of ill health or parasite infestation are detected in accordance with LPM
		2.4 Animals showing signs of ill health are quarantined according to animal health care requirements and Animal Disease Act (Cap 364)
		2.5 Overgrown *dairy animal* hooves are trimmed as per the LPM and animal welfare regulations
		2.6 Dairy animals are *groomed* according to the LPM and work place policy
3.	Evaluate maintenance of dairy herd health	3.1 Animals showing signs of ill health or parasite infestation are detected in accordance with LPM
		3.2 Parasite and disease incidences are reported to farm authorities according to work place policy and Animal Disease Act (Cap 364)
4.	Complete maintenance of dairy herd health	4.1 Herd health management equipment and structures are cleaned, sterilized and preserved in accordance with work place policy
		4.2 Reusable materials and supplies are stored as per manufacturer's instructions manual and workplace policy.
		4.3 Waste is disposed off with regard to workplace policy

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

Variable	Range
1. Tools and equipment includes but not limited to	Tools and equipment required for: • Deworming • Spraying and dipping • Hoof trimming • Disbudding / dehorning • Grooming • Weighing • Land clearing, cleaning and disinfection

2. Materials and supplies include but not limited to	Supplies and materials required for: • Dewormers • Acaricides • Cleaning and disinfection
3. Environment protection regulations includes but not limited to:	• Public Health Act • EMCA 1999 • OSH Act 2007
4. Dairy animals include but not limited to	Livestock kept mainly for milk production: • Cattle • Goats • Camels
5. Groom includes but not limited to	• Brushing • Washing • Clipping coat hair
6. Biosecurity measures includes but not limited to:	• Foot baths • Isolation pens/paddocks • Fencing • Disinfection/fumigation • Parasite and pest control • Proper disposal of dead animals

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required skills

The individual needs to demonstrate the following skills:

- Animal handling
- Farm equipment operation
- Troubleshooting

Required knowledge

The individual needs to demonstrate knowledge of:

- Basic control methods of common diseases and parasites
- Signs of ill health in dairy animals

- Animal welfare
- Food safety principles
- Hoof trimming procedure
- Grooming procedures

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate:
	1.1 Applied food safety measures to maintain dairy herd health
	1.2 Implemented bio-security measures
	1.3 Controlled external parasites
	1.4 Quarantined animals showing signs of ill health
	1.5 Used correct procedure to dairy animal trim hooves
	1.6 Observed occupational safety and health measures in the working environment
	1.7 Observed laid down environmental protection measures at the work place
	1.8 Documented dairy herd health maintenance and food safety records
2. Resource Implications	The following resources must be provided:
	2.1 Assessment location / workplace
	2.2 Personal Protective Equipment and Apparel
3. Methods of Assessment	Competency may be assessed through:
	3.1 Observation
	3.2 Oral questioning
	3.3 Written test
	3.4 Portfolio of Evidence
	3.5 Interview
	3.6 Third party report
4. Context of Assessment	Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.

5.	Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended.