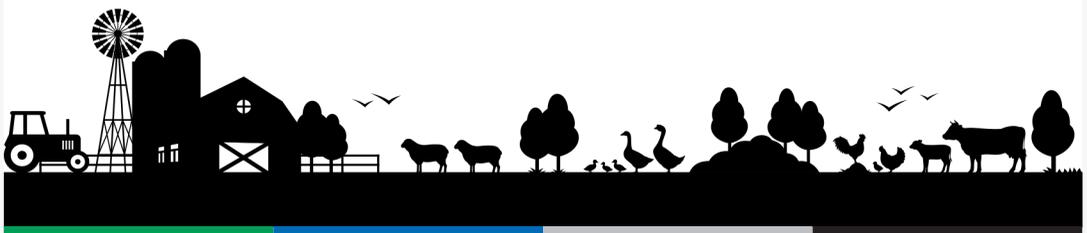




Instituut vir Suiweltegnologie NPC
Institute for Dairy Technology NPC
Reg no: 2000/015003/08

MPO TRAINING INSTITUTE **PROSPECTUS**





Instituut vir Suiweltegnologie NPC
Institute for Dairy Technology NPC
Reg no: 2000/015003/08

INSTITUTE FOR DAIRY TECHNOLOGY

NPC Reg. No.: 200/015003/08

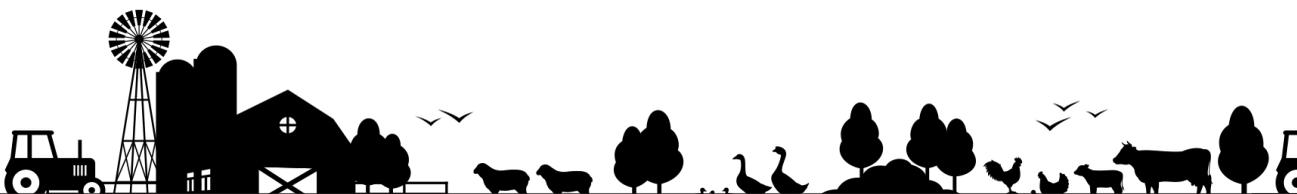
Provider code: PAET 7675, ETQA ID 694
(Animal Production Level 1–4)

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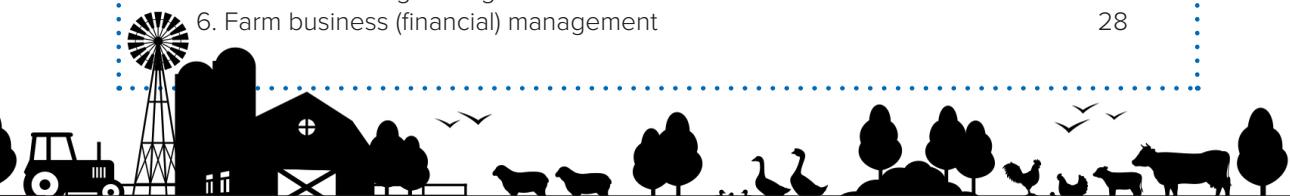
86 Watermeyer Street
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INTRODUCTION

The Milk Producers' Organisation (MPO) **Training Institute**, an affiliated company of the MPO, focuses on **training the farmworkers** of commercial farmers, as well as on programmes aimed at achieving transformation objectives for emerging farmers. The MPO Training Institute consists of a dynamic team who are fully committed to the MPO's strategic vision - **sustainable dairy farming**. To achieve this vision, dairy farming must be competitive and responsible. This implies that dairy farmers must focus on the key areas that make a difference to the economic performance of their farms and also address their responsibilities inside and outside the farm gate. This is what the MPO's **three pillars** of sustainability - **profitability, people and planet** (the 3P's) are all about. The MPO Training Institute focuses on the people pillar of the MPO's strategic vision by enhancing the dairy farm workforce's access to information, and the transfer of knowledge through **on-going training, development and mentorship**. The institute is managed by Helene Pheiffer, who is supported by administrative staff and **five permanent instructors** providing nationwide **on-farm training**. A team of **industry experts** also supports the MPO Training Institute with education and training development.

HELENE PHEIFFER



Helene has been the **training and transformation services manager** of the MPO since 2009 and **manager** of the MPO Training Institute since 2016. She holds a degree in **military science**, an honours degree in **industrial psychology**, a **master of business administration (MBA)** and **various diplomas**.



PEOPLE



PLANET



PROFITABILITY

CORLIA OBERHOLZER

Corlia is our **training and client support manager** and is familiar with the dairy industry as she grew up on a dairy farm. She completed her degree in **journalism** as well as two honours degrees, namely **psychology** and **criminology**. She is currently studying towards an **MBA** through the Edinburgh Business School.





CHANTEL JOUBERT

Chantel has been working at the institute as a training coordinator since 2016. She is responsible for the scheduling and logistical arrangements of courses, data processing and administrative duties.



WILFRED PHAAHLA

Wilfred completed his national diploma in agriculture and animal production at the Pretoria Technikon. Although he has extensive experience in dairy production and broiler farms, he is passionate about cattle farming. Wilfred specialises in animal husbandry, health and feeding management practices. Before joining the MPO Training Institute as a facilitator and assessor, he was a skills facilitator at Skills for Africa.



HEZEKIEL MATLAMELA



Before Hezekiel joined the MPO team he, gained experience as an animal health technician, farm manager and training facilitator at various training centres (including the Boskop Training Centre). Hezekiel's expertise covers intensive dairy knowledge and experience, animal handling and feedlot practices, as well as other farming ventures such as broilers, pigs and ostriches. Hezekiel is registered as an animal health technician at the South African Veterinary Council and he is also an accredited training assessor.

JUSTICE PHAAHLA

Justice has been an instructor and assessor at the MPO Training Institute for the past decade. He started his career in agriculture as a human resource administrator on a farm before working as a training facilitator and training manager at the Boskop Training Centre. Justice specialises in dairy management skills and in presenting the code of practice for dairy producers.



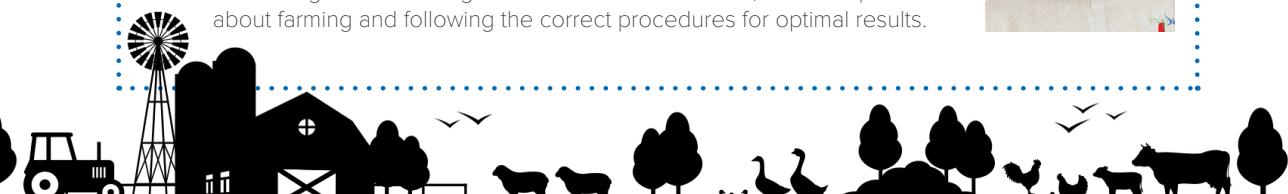
FREDDY MOROKOLO



Freddy facilitates and assesses the tractor maintenance courses. His experience as a training facilitator started at the Boskop Training Centre. He also gained technical experience at various motor dealers, including Honda, Daewood, Peugeot, Chevrolet and Nissan. Freddy presents courses in livestock transport and economic empowerment.

JUSTICE MATHEBULA

Justice has been a training facilitator and assessor at the MPO Training Institute for the past 17 years. He specialises in dairy production, calf rearing, reproduction and artificial insemination practices. Justice was trained at the Boskop Training Centre and at Taurus, the local bull station, where he was also an instructor before permanently joining the MPO. He completed numerous courses as an instructor at the MPO Training Institute. Being a small-scale farmer himself, Justice is passionate about farming and following the correct procedures for optimal results.



SERVICES

1. TRAINING



1.1 Skills development programmes

These development programmes for farmworkers, which combines theory and practice, are presented on the farm over a five-day period. Our skills development programmes are all based on AgriSeta unit standards and represent various National Qualifications Framework (NQF) levels (nationally recognised and internationally comparable training standards). The farmer or farm manager acts as a mentor after the training programme has been completed to confirm that the outcomes of the training have been reached. Mentoring time depends on the credits for (or notional hours devoted to) the skills programme.

1.2 Dairy Occupational Qualification

This Dairy Occupational Qualification was developed to address all the dairy disciplines identified by the industry. The Dairy Occupational Qualification is presented on three levels:

- Dairy farmworker
- Dairy farm supervisor
- Herd farm manager

These levels consist of various modules with:

- knowledge-based or theoretical components
- practical skills components
- work experience components of learning.

1.3 Red Meat Transformation Programmes

The MPO Training Institute develops and provides programmes, based on gap analyses and industry needs, to new developing entrepreneurs in the agricultural sector.

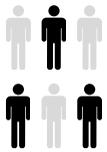
The red meat transformation programme for the Red Meat Producers' Organisation (RPO) includes:

- Basic Herd Management and Herd Health
- Veld and Pasture Management
- Reproduction Management
- Cattle Marketing Management
- Farm Business (Financial) Management.



2. ANNUAL TRAINING REPORT (ATR)/ WORKPLACE SKILLS PLAN (WSP)

The MPO Training Institute helps commercial farmers claim 20% of the mandatory grants from the skills development levies (SDL) paid to SARS. The institute does the administration for the completed training of the ATR at dairy farms and the WSP for planned training in the following year. The mandatory grants are reinvested in training, which is administered and managed by the MPO Training Institute. This service not only benefits the farmer but also provides industry statistics and allows the industry to align their training with the agricultural-sector's scarce and critical skills.



INVESTING IN OUR YOUTH

3. BURSARIES

The MPO Institute provides **students** with access to **workplace experience, internships, mentors and bursaries.**

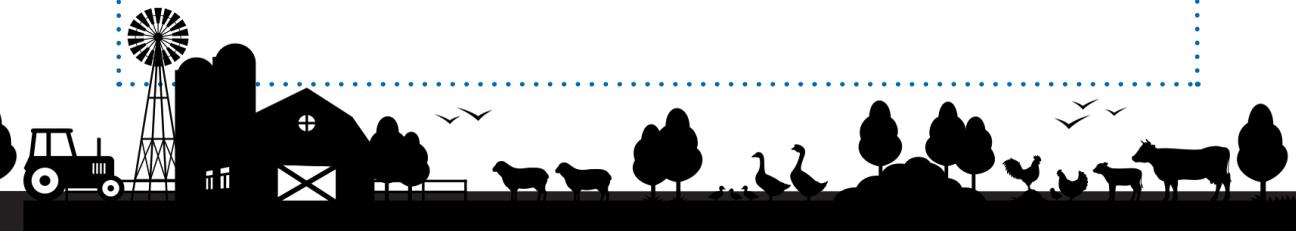
4. TRAINING MATERIAL DEVELOPMENT

The MPO Training Institute is continuously working on developing **new training material** to meet the training needs of the South African agricultural industry.

NOTES



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SKILLS DEVELOPMENT PROGRAMMES

1. DAIRY PRODUCTION

Dairy production, husbandry and hygiene practices.

US 116207, US 116120, US 116110

NQF Level 1, 2

Credits 15

This skills programme addresses all important aspects of working on a dairy farm and will enable dairy farmworkers to perform effectively.

SKILLS

- Pre-milking, milk-routine and post-milking procedures
- Cleaning the milking system, the milking parlour, milking equipment and the bulk tank
- Basic principles of record-keeping and hygiene, as well as the handling and marketing of milk
- Basic principles of care/handling and feeding of calves, heifers and cows
- The identification of udder diseases
- Maintenance after milking

2. ARTIFICIAL INSEMINATION

Basic breeding and artificial insemination practices.

US 116107, US 116215

NQF Level 2, 3

Credits 10

Identifying and monitoring breeding behaviour. The pre- and post-partum behaviour of farm animals will contribute to employees operating effectively in an animal production environment, while implementing sustainable and economically viable production principles.

SKILLS

- Breeding principles and practices
- Heat detection
- Normal and abnormal behaviour during the birth process
- Post-partum behaviour
- Basic artificial insemination practices and procedures

3. ANIMAL HUSBANDRY

Care, observe and handle animals.

US 12587, US 116197

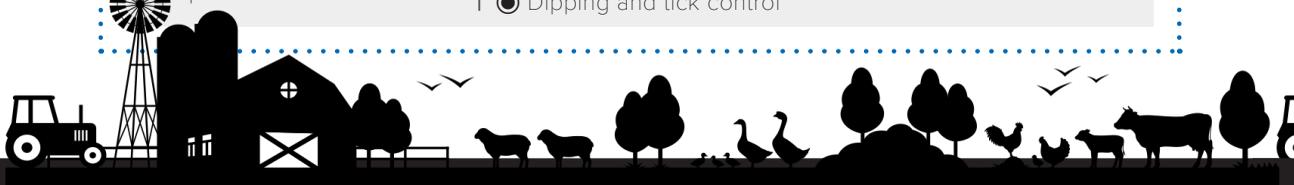
NQF Level 1

Credits 15

This skills programme addresses all the skills required by a farmworker to apply basic animal husbandry practices. The course involves many practical demonstrations.

SKILLS

- Identifying general symptoms of sick animals
- Knowledge of common diseases
- Record-keeping
- Basic vaccination and immunisation programmes
- Correct procedures for handling vaccines
- Dipping and tick control
- Correct animal handling
- Procedures for restraining and herding animals
- Dehorning and castration
- Marking and identification
- Heat detection
- Feed and water practices and supply



4. SOCIO-ECONOMIC EMPOWERMENT

Economic systems, agricultural production management systems, work ethics and personal finance.

US 13996, US 13357, US 15092

NQF Level 1

Credits 10

In order to operate effectively within a free-market agricultural production system, farmworkers need to understand basic economic principles and the concept of work ethics.



- Working effectively within a workplace
- Understanding the free-market economic system and the farmworker's role in it
- Understanding agricultural production systems and the importance of productivity
- Planning and managing personal finances

5. OCCUPATIONAL HEALTH AND SAFETY

Apply and utilise health and safety principles in livestock production and processing.

US 123172

NQF Level 2

Credits 7

The dairy industry in South Africa is regulated by various acts, regulations and guidelines. This skills programme includes the relevant sections of the South African Occupational Health and Safety Act (85 of 1993) that affect workers in the dairy and livestock production environment. Records of this training should be made available to an inspector on request.



- Gaining knowledge of responsibilities of the employer and the employees
- Knowledge of requirements for transport, loading and equipment safety
- Steps to be taken during emergency situations
- Personal and food hygiene training relevant to the production and handling of milk
- Good dairy farming practices based on the Dairy Standard Agency's *Code of Practice for Milk Producers*

6. FEEDLOT HANDLER - LIVESTOCK HANDLING

Observe and handle animals, inspect animal health and administer livestock processing treatments.

US 116197, US 116643, US 116074

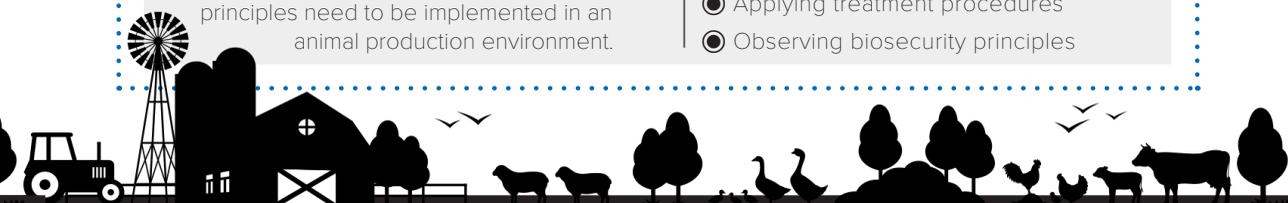
NQF Level 1, 2

Credits 18

Observe animal health status and apply feedlot processing treatment programmes to enhance livestock health and quality. Animals must be handled according to best practices that will ensure healthy animals and humane treatment. Sustainable and economically viable production principles need to be implemented in an animal production environment.



- Observing, recording and reporting on normal and abnormal animal behaviour and physical attributes
- Herding animals in a controlled manner
- Restraining animals in a restraint facility
- Preparing and administering livestock-processing treatments
- Selecting vaccines and pharmaceuticals
- Adhering to animal and human safety precautions
- Applying treatment procedures
- Observing biosecurity principles



7. FEEDLOT UNIT CONTROLLER 1 - DISEASES AND BIOSECURITY

Prevent and treat animal diseases, determine feedlot mass and implement animal health biosecurity.

US 116219, US 116637, US 116308

NQF Level 3, 4

Credits 10

The procedures relating to animal health best practices, biosecurity programmes and record-keeping are essential for feedlot unit controllers to operate effectively in an animal production environment.



SKILLS

- Carrying out animal health procedures and supervising the way animals are restrained for such procedures
- Performing basic veterinary procedures
- Treating and vaccinating animals under supervision
- Implementation of basic principles of biosecurity
- Preparing the weighing facility, determining livestock mass and restoring the weighing facility to an inoperative status
- Supervising animal disease prevention
- Ensuring that the basic clinical examination is done correctly
- Ensuring correct dosage rates, and calibrating and using instruments correctly

8. FEEDLOT UNIT CONTROLLER 2 - FEEDLOT ENVIRONMENT, FEEDLOT FEED INGREDIENTS AND BLENDS

US 116647, US 116653

NQF Level 3

Credits 16

Understanding the feedlot operating environment improves the cost-effectiveness of feedlots. Therefore, an understanding of the purchase areas, role players, legislation and efficiency terminology used is essential. The identification of different feedlot feed ingredients and feedlot blends according to the level of concentration is also important.



SKILLS

- Identifying all the industry role players and structures
- Evaluating livestock purchase regions
- Understanding relevant legislation applicable to the livestock industry
- Applying feedlot production and slaughter norms
- Identifying basic feedlot feed ingredients
- Distinguishing between blended feedlot feeds
- Identifying the quality of blends
- Identifying basic feedlot feed ingredients

9. TRACTOR MAINTENANCE

Maintain, repair and drive a tractor.

US 116060, US 116820

NQF Level 2

Credits 15

Correct maintenance and safety procedures should be applied when operating a tractor. The ability to use science and technology competently and use the correct techniques when operating tractors will contribute to a sustainable and economically viable production environment.



SKILLS

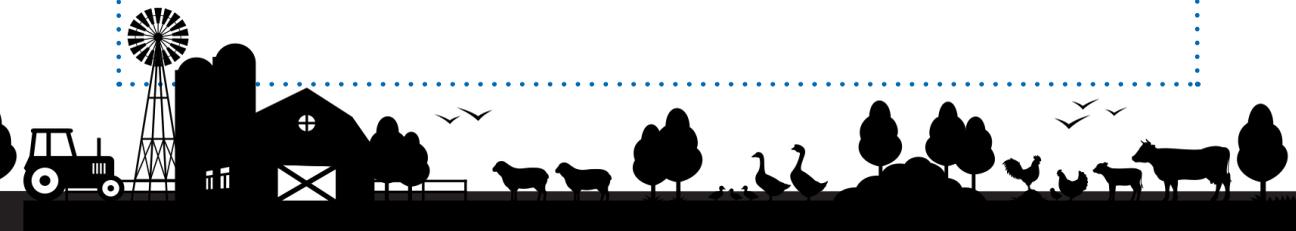
- Driving a tractor
- Conducting daily maintenance on a tractor
- Complying with the legal requirements for operating a tractor
- Recognising operating hazards in the use of a tractor
- Documenting tractor use



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DAIRY OCCUPATIONAL QUALIFICATION

The **Dairy Occupational Qualification** is regulated by the Quality Council for Trade and Occupations (**QCTO**) and covers **levels 1–5** of the National Qualifications Framework (**NQF**). This training gives dairy employees the opportunity to achieve an occupational qualification.

The **qualification** consists of **three** different levels with the **required** modules:

1. DAIRY FARMWORKER

NQF Level 2

* **Entry requirements: Foundation learning competence (English reading and writing)**

- Module 1: The South African dairy farming environment
- Module 2: Dairy calf and heifer rearing, feeding and healthcare
- Module 3: Dairy animal healthcare
- Module 4: Dairy animal reproduction
- Module 5: Dairy livestock feeding
- Module 6: Milk harvesting and in-parlour processing
- Module 8: *Code of practice for milk producers*

2. DAIRY SUPERVISOR

SAQA ID 105011

NQF Level 3

* **Entry requirements: Grade 12**

- Module 1: The South African dairy farming environment
- Module 2: Dairy calf and heifer rearing, feeding and healthcare
- Module 3: Dairy animal healthcare
- Module 4: Dairy animal reproduction
- Module 5: Dairy livestock feeding
- Module 6: Milk harvesting and in-parlour processing
- Module 7: Team leadership
- Module 8: *Code of practice for milk producers*

The content of the dairy farmworker and dairy supervisor modules covers the same topics, however the dairy farmworker module is a more simplified version.



3. DAIRY UNIT MANAGER

SAQA ID 101570

NQF Level 5

* **The dairy manager builds on the dairy supervisor qualification**

- Module 9: Dairy farm production management
- Module 10: Farm business management
- Module 11: Pasture management
- Module 12: Reproduction management
- Module 13: Biosecurity management



DAIRY OCCUPATIONAL QUALIFICATION

The qualification as a dairy farmer can only be obtained once the learner has completed both the dairy supervisor and manager levels. The modules can also be presented separately and each module completed will be recognised. The qualification can also be attained, in part, through recognition of prior learning (RPL), which includes the assessment of previous learning interventions and work experience.

Knowledge

is conveyed during scheduled workshops or training sessions. Competency is assessed by testing the knowledge gained at the end of each training session. The theory or knowledge component is divided into 13 modules.

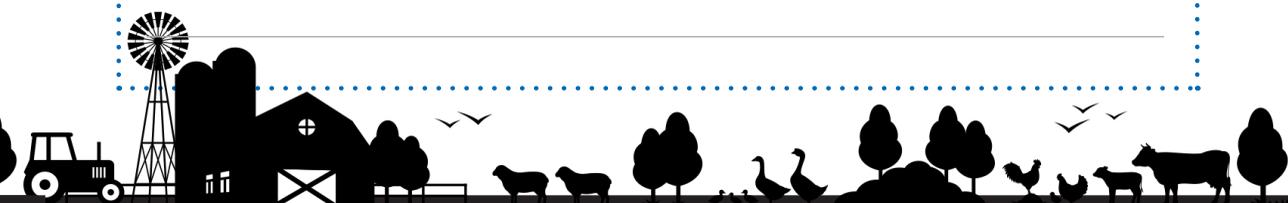
Practical skills

require the performance of specific practical tasks. Practical skills are assessed after the relevant theory has been discussed. The assessor receives an assessment guide with stipulated assessment criteria and observes the learner doing specific tasks. If the learner is able to meet the requirements, the learner is declared competent. If the learner is not yet competent, another assessment intervention can be scheduled when the learner indicates they are ready to be assessed.

Work experience

forms an important part of the whole training programme. Each learner receives a logbook stipulating how (observing, assisting or without supervision) and for how long the learner must actively be involved in specified tasks on a dairy farm. The logbook must be completed by the supervisor or farmer under whose guidance the learner worked in a specified section on the dairy farm and serves as important evidence of the learner's overall competency.

NOTES



MODULE 1

South African dairy farming environment

FARMWORKER AND SUPERVISOR MODULE



During this course, students will learn about the dairy industry value chain, with the first stage consisting of commercial as well as small and medium-sized producers. Dairy farmers' production systems need to combine productivity and profitability, while protecting human and animal health, animal welfare and the environment. Students will also learn about the various dairy breeds that exist. The aim when choosing the breed and production system should, therefore, be to produce the best-quality milk at the lowest possible cost. Lastly, the training will also touch on the basic concepts and ideas of a dairy farming business, as it is crucial for a dairy farm to adopt and implement the relevant business skills. **NQF Level 2**



Knowledge

- Introduction to the South African dairy industry
- Dairy breeds
- Basic dairy farming business concepts

MODULE 2

Dairy calf and heifer rearing, feeding and healthcare

FARMWORKER AND SUPERVISOR MODULE



Heifer calves represent the future of a herd. By understanding the scientific principles of calf growth, nutrition, health and behaviour, producers can develop a successful management system. The importance of ensuring the welfare and biosecurity of future milking herds can never be overestimated. Students will learn how to design calf-rearing facilities to provide the required protection and comfort that calves need, while also maintaining hygiene to ensure the health and vitality of the calves. Because feeding is a crucial part of raising healthy and productive calves, students should be able to ensure good colostrum management and consistent feeding after completing module 2. The training will also cover diseases of calves and the relevant risk factors.

NQF Level 2, 3



Knowledge

- Introduction to dairy calf and heifer healthcare
- Calf rearing systems
- Hygiene and care for calves
- Calf feeding concepts
- Awareness of dairy calf diseases
- Calf and heifer care and production concepts



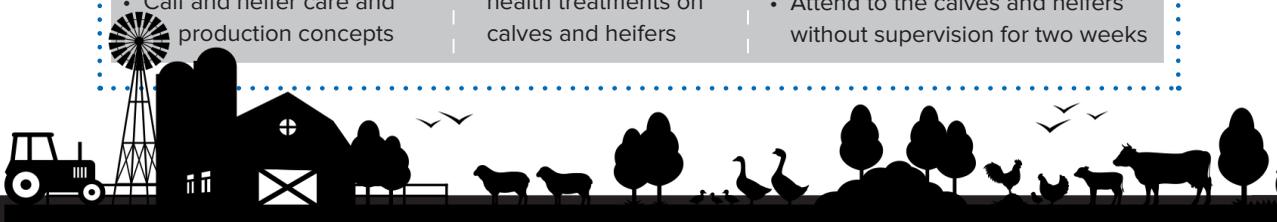
Practical skills

- Perform calf rearing and production practices
- Perform a systematic health inspection of the calf and heifer
- Administer basic animal health treatments on calves and heifers



Work experience

- Assist and observe an experienced person attending to the calves and heifers on a dairy farm for one week
- Attend to the calves and heifers for one week under close supervision
- Attend to the calves and heifers without supervision for two weeks



MODULE 3

Dairy animal healthcare

FARMWORKER AND SUPERVISOR MODULE

Students will learn not only to treat diseases but also to focus, in general, on promoting health on the dairy farm. Effective health management practices will minimise the introduction and/or spread of diseases in dairy herds and, therefore, students will need basic knowledge of the anatomy and functions of the various anatomical systems. Information of what causes diseases and how animals can get a disease will assist students to treat sick animals. They will need to adopt a good biosecurity plan as part of their daily duties to help reduce the risk of new diseases entering the herd. General biosecurity measures should include restricting and controlling the movements of people, vehicles and equipment into areas where cattle are kept.

NQF Level 2, 3



Knowledge

- Diagrammatic illustrations and basic functions of the anatomical systems
- General dairy livestock health
- Awareness of the causes of disease in dairy animals
- Health assessment
- Parasites and basic life cycles
- Farm biosecurity and risk prevention (including zoonotic diseases)



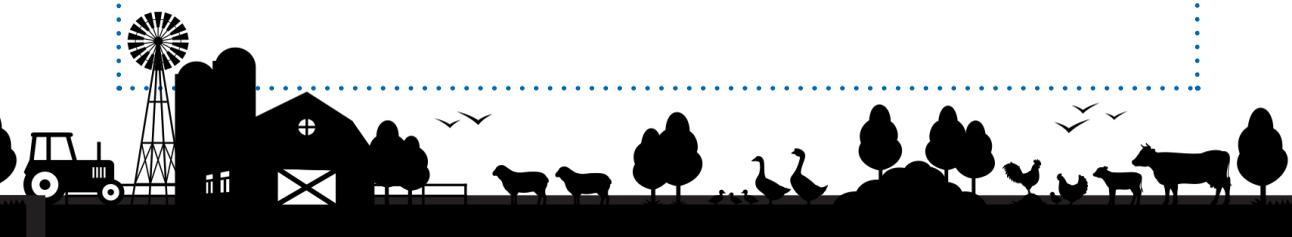
Practical skills

- Perform a systematic health inspection on cows and bulls
- Administer basic animal health treatments of cows and bulls



Work experience

- Assist and observe an experienced person performing healthcare practices pertaining to cows and bulls on a dairy farm for one week
- Attend to general healthcare practices pertaining to cows and bulls on a dairy farm under supervision for one week
- Attend to general healthcare practices pertaining to cows and bulls on a dairy farm within normal farm reporting structures and oversight for two weeks



MODULE 5

Dairy livestock feeding

FARMWORKER AND SUPERVISOR MODULE



Optimising milk production requires an advanced feeding strategy. Students will learn about the different feed types available for dairy animals namely, roughages, concentrates and minerals. The quantity and quality of feed, in addition to water, largely determines the dairy animal's health and productivity and many dynamic factors influence the nutrient requirement of animals along with the nutrient availability from feeds. The course will cover both pastures and total mixed rations (TMR) systems. Successful dairy cow nutrition starts with maximising dry matter intake (DMI), which is why the use of TMR is a popular and effective way of meeting the nutritional needs of dairy cows. Although the level of milk production on pastures is usually lower than with a TMR system, it is often more economical. Supplementary feeding and licks can serve as tools to better manage pastures, cow body condition, fertility and milk composition. Ultimately, deciding what feeding system to use will depend on availability, cost, quantity, and quality of feed. Students will learn proper planning, implementation and maintenance of feeding facilities to align with the primary objective of dry-cow nutrition and management: optimising health, milk yield and reproduction in the following lactation period.

NQF Level 2, 3



Knowledge

- Dairy feed types and feeding practices
- Feeding of heifers
- Feeding of cows in milk
- Feeding of dry cows
- Feeding facilities and equipment



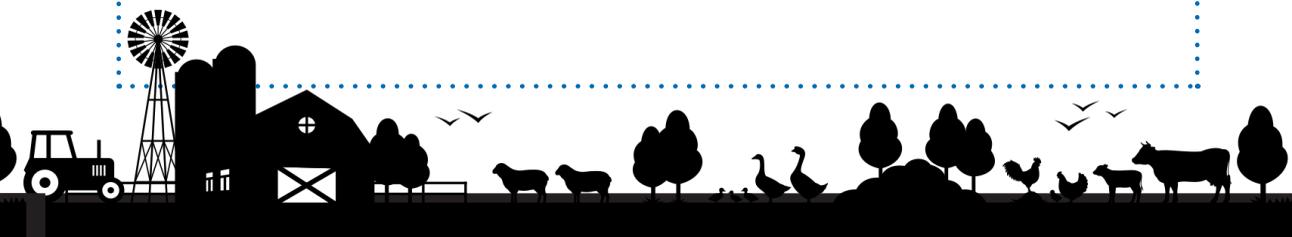
Practical skills

- Prepare, mix and distribute supplementary and concentrated feed
- Monitor feed stock and storage



Work experience

- Assist and observe an experienced person preparing and distributing feed to lactating cows on a dairy farm for one week
- Attend to preparing and distributing feed to lactating cows for one week under supervision
- Attend to preparing and distributing feed to lactating within normal farm reporting structures and oversight for two weeks



MODULE 6

Milk harvesting and in-parlour processing

FARMWORKER AND SUPERVISOR MODULE

The location and layout of the milking shed is of vital importance for the smooth and successful running of a dairy farm and there are numerous types of milking parlours covered by this course to choose from. Students will be taught what is good udder hygiene because it prevents costs and losses relating to mastitis. Milk samples that are taken from the bulk tank can be used as a screening test to monitor the udder health status and the quality of the milk in the herd. Ultimately, students will have knowledge about the correct milking procedures, how to handle cows gently and clean udders and about a clean environment as they all contribute to the production of quality milk. Milking should be done by trained and responsible people and a consistently applied milking routine is essential. Students will learn how to keep records, collecting relevant information that can help the farmer make good decisions based on facts and statistics, with the overall objective of improving efficiency on the farm. The training will also deal with quality control during the in-parlour processing of milk in order to maximising profitability.

NQF Level 2, 3



Knowledge

- Milk harvesting facilities
- Udder health
- The milk harvesting process
- Dairy parlour equipment and systems
- Dairy parlour hygiene
- Essential production records
- Composition of milk and quality indicators
- In-parlour milk processing and quality control concepts



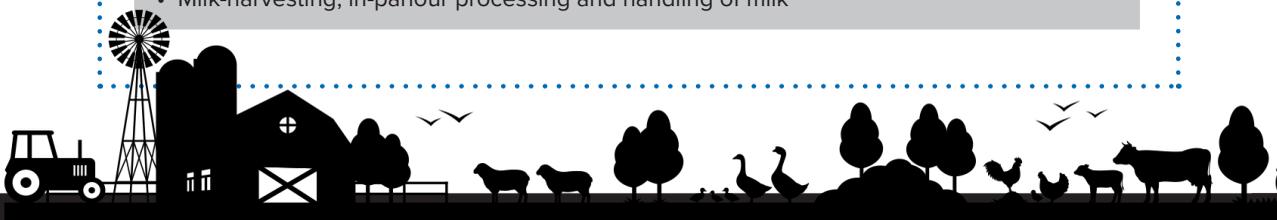
Practical skills

- Harvest milk and attend to milking parlour hygiene and equipment
- Attend to cleaning the dairy parlour and waste water treatment
 - Prepare cows for milking
 - Handle lactating cows under treatment
 - Handle cows fresh in milk (colostrum)
 - Milk cows and maintain milk records
 - Attend to the cooling and storage equipment
 - Perform dairy parlour hygiene practices
 - Clean and care for dairy parlour equipment
 - Perform routine maintenance of the water supply and treatment system



Work experience

- Assist with and observe the milk-harvesting process for a period of one week
- Perform milk harvesting under supervision for a period of two weeks
- Attend to the milk-harvesting process for a period of two weeks without supervision within normal farm structure and oversight for two weeks
- Milk-harvesting, in-parlour processing and handling of milk



MODULE 7

Team leadership

SUPERVISOR MODULE



The role of the supervisor is a complex one, as it entails various responsibilities towards both employees and management. Students will learn crucial skills such as daily planning, communication, setting performance standards and delegation as well as motivating and inspiring the workforce. Supervisors play an important role in increasing employees' effectiveness and productivity in the work environment. They are also responsible for organising and regulating progress continuously, which will help to ensure the team is on schedule in meeting the objectives and performance targets as set out by the farmer. The course also covers the supervisor's role in maintaining workplace discipline and dealing with conflict.

NQF Level 2, 3



Knowledge

- Introductory concepts supervision
- Performance standards concepts
- Motivation and team leadership concepts
- Interpersonal relations
- First-line discipline
- Work efficiency and effectiveness



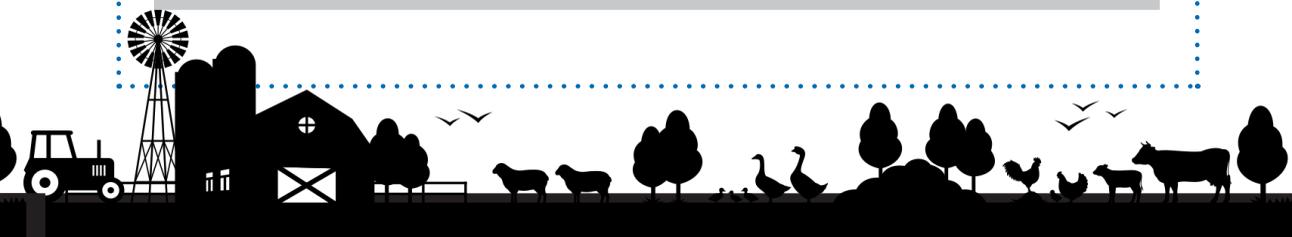
Practical skills

- Initiate and record discipline
- Address poor performance
- Perform a safety inspection
- Plan and allocate work
- Coach team members
- Provide feedback on performance
- Conduct a briefing session
- Collect information and compile dairy parlour records
- Administer dairy parlour records



Work experience

- Direct work teams caring for calves, heifers, cows and bulls for a period of one week
- Allocate tasks to team members; monitor the execution of the tasks and report
- Recognise and respond according to accepted workplace standards to problems that arise during the execution of production and healthcare tasks
- Lead and direct work teams during days when limited support is available, such as over weekends or public holidays.
- Assist with and observe dairy farming record-keeping and administration for a period of two days
- Perform dairy farm record-keeping and administration under supervision for a period of three days
- Attend to dairy farming record-keeping and administration within normal farm reporting structures and oversight for a period of one week



MODULE 8

Code of Practice for Milk Producers

SUPERVISOR MODULE



It is a legal requirement for food handlers to be trained in food safety [R961 of 23 November 2013, Regulation 10 (6) and (7)] by an accredited training provider. Records of training must also be made available to an inspector during farm visits and audits.

The Dairy Standard Agency's (DSA) **Code of Practice for Milk Producers** offers students a systematic approach to compliance with food safety requirements at primary production level. It also aims to provide students (as well as stakeholders in the industry) with norms for measuring supplier quality assurance and addresses the minimum requirements for export certification. When designing any structures on a dairy farm, these specific requirements need to be considered and all dairy farmers should adhere to the recommended good milking practices. In addition, it is also important to maintain machines in accordance with the instructions and requirements of the various manufacturers. Effective hygienic practices during milking are important, as the system is required to produce safe and suitable milk and dairy products. Specific requirements regarding the standard for raw milk need to be adhered to. Lastly, the health and general welfare of dairy animals are also considered during the training. **NQF Level 3, 4**



Knowledge

- Introduction to the **Code of Practice for Milk Producers**
- Structural requirements and machine maintenance
- Good milking practices
- Animal health and welfare
- Hygiene
- Documentation
- Standards of and quality control for raw milk



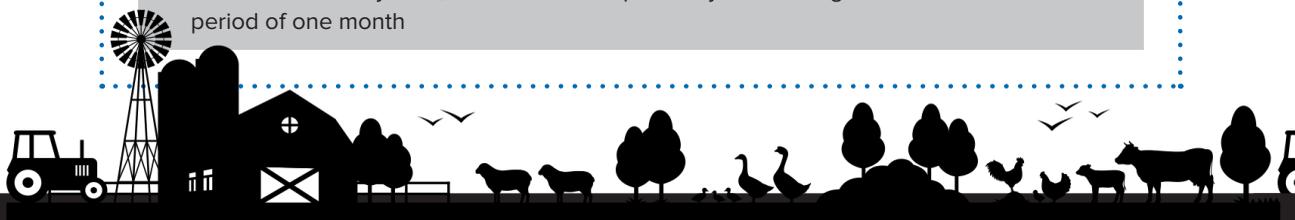
Practical skills

- Identify structural requirements and perform machine maintenance
- Perform recommendations for good milking practices
- Perform recommendations for animal health and welfare practices
- Perform general and dairy farm specific hygiene practices
- Assist with the administration of dairy farm-specific documentation



Work experience

- Assist with and observe the implementation of concepts relating to the **Code of Practice for Milk Producers** on a dairy farm for two weeks
- Implement concepts relating to the code of good practice on a dairy farm under supervision for one month
- Manage the implementation of concepts relating to the **Code of Practice for Milk Producers** on a dairy farm, under normal supervisory and managerial conditions for a period of one month



Code of Practice for Milk Producers Legeda(i)ry board game FARMWORKER MODULE

The MPO Training Institute has developed a board game for milk producers that will help them ‘moo-ve’ compliance in an engaging and industry-relevant way. The board game, which goes by the name of Legeda(i)ry, uses gamification — the application of game-design elements in non-gaming contexts — as an alternative, cutting-edge training experience for farmworkers to maintain the integrity of suppliers’ milk and manage the supply chain effectively.

Gamification techniques, such as this board game, compel employees to prove their value and knowledge, encouraging and boosting participation, while at the same time injecting an element of fun.

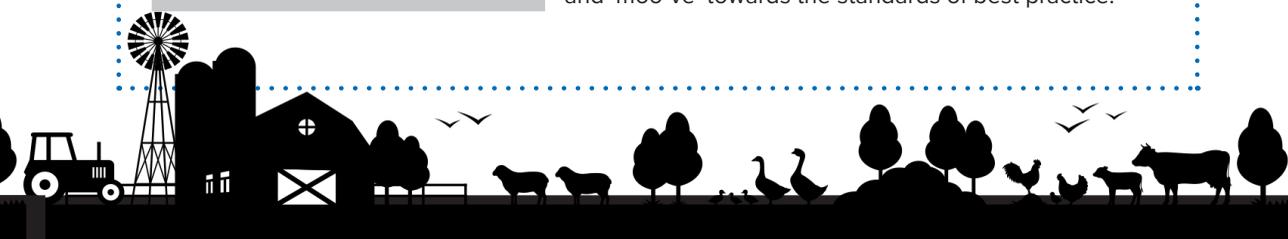
The aim of Legeda(i)ry is to ‘moo-ve’ as a herd (i.e. a team) to greener pastures on the board while interacting with the content of the **Code of Practice for Milk Producers**.

One chapter represents one round on the board. Since there are multiple rounds, this creates a friendly competitive environment among the participants. In this way, participants need to use their collective work experience and knowledge and engage with each other to learn about industry standards that ensure food safety. The value of gamification for milk producers lies in the fact that this novel way of training and:

- increases learning and retention of regulatory concepts about food safety;
- increases awareness and understanding of the necessity of the code of practice;
- uses educationally relevant and experiential learning methods;
- enables ‘cross-pollination’ of learning in the sense that participants assist, correct, and encourage each other in providing the most complete, accurate answers relevant to the code of practice; and
- involves all farmworkers in various ways, whether they are literate or illiterate.



Ultimately, Legeda(i)ry serves as a platform for improving internal participation and operations in such a way that milk producers can overcome their compliance ‘hurdles’ and ‘moo-ve’ towards the standards of best practice.



MODULE 9

Dairy farm production management

MANAGER MODULE



The dairy farm manager needs to have a broad knowledge of a range of dairy farm activities in order to fully understand how it will impact the effectiveness of managerial decisions. This course starts with the different dairy farm designs available, the strengths and weaknesses of each, as well as how the correct utilisation of facilities will influence dairy farm processes. Reproductive performance has enormous consequences for the overall productivity and profitability of a dairy farm and, therefore, students will learn how to plan properly and set specific reproduction goals. Students will also gain an understanding of nutrient requirements of dairy cows at various stages of lactation as well as how to combine various feed ingredients to meet these requirements cost-effectively. Better feed efficiency and a scientifically balanced diet help to achieve maximum milk yield and increased production per cow. The training will also touch on animal health, as the total profitability of the dairy farm depends on a healthy herd. Animals need to be healthy to produce milk at optimal levels. Learning about biosecurity programmes can help managers prevent or reduce the risk of disease entering and spreading in their herd.

NQF Level 4, 5



Knowledge

- Dairy farm design concepts
- Dairy animal breeding
- Dairy animal nutrition
- Dairy animal health management
- Computer-based programs and the value of milk recording



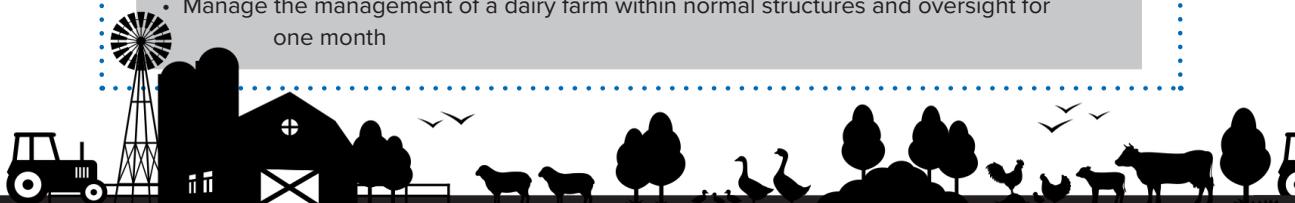
Practical skills

- Implement herd composition objectives
- Implement healthcare policy
- Implement breeding policy
- Implement feeding policy
- Maintain a data management system
- Manage milk parlour routines
- Implement milk parlour quality management system



Work experience

- Assist with and observe dairy farming management for two weeks
- Perform dairy farm management activities under supervision for one month
- Manage the management of a dairy farm within normal structures and oversight for one month



MODULE 10

Farm business management

MANAGER MODULE

This course will teach managers sufficient knowledge to be able to overcome the challenges of varying costs and prices, resource allocation, labour issues and climatic conditions. The manager needs to continuously ensure that all standard operating procedures are followed in exactly the same way every day, guaranteeing that they keep within the bounds of dairy farming-related legislation. Managers will also learn about various financial terms and accounting concepts that are needed to manage a business successfully. Financial management on a dairy farm requires not only knowledge of money matters, but also insight into the productivity and profitability of a dairy herd, while keeping in mind natural resource management; which is about the long-term implications of our actions, with sustainability as the goal. **NQF Level 5**



Knowledge

- Farm business management
- Farm labour management
- Financial and stock management
- Natural resource management
- Introductory overview of dairy farming-related legislation



Practical skills

- Control operational costs
- Manage farm labour
- Manage farm records
- Manage stock and assets



Work experience

- Assist with and observe dairy farming management for two weeks
- Perform dairy farm management activities under supervision for one month
- Manage a dairy farm under normal supervisory and management conditions for one month

The person will be expected to engage in the following activities:

- Assist with and observe dairy herd management activities and functions such as feeding practices, herd healthcare practices, breeding practices, herd management planning and reporting meetings
- Assist with and observe dairy parlour management activities and functions such as following milking parlour routines, ensuring milking parlour hygiene, maintaining the milking parlour, marketing the milk, parlour management planning and giving feedback at meetings
- Assist with and observe dairy farm administration and cost-control activities such as record-keeping and reporting, the purchasing of goods, control of stocks and assets, financial planning and reporting meetings
- Assist with and observe labour management activities and functions such as industrial relations, performance management, labour control, labour planning and reporting at meetings



MODULE 11

Pasture management

MANAGER MODULE



Veld and cultivated pastures can play complementary roles in providing fodder to livestock on dairy farms and, therefore, it is essential that students learn how to integrate the two. Pasture can be a cost-effective option for feed and should be incorporated into the farming system. This course covers grazing principles that form part of fodder flow programmes as well as the nutritional value of green pastures. Where pastures do not meet the roughage and nutritional needs of dairy cows, supplementary feeding needs to be provided. Students will be taught about certain health risks, metabolic disturbances and feeding imbalances that are related to pasture-based feeding. It is important for students to be able to identify and understand these health risks in order to minimise their effect. Nutritional imbalances, internal parasites, plant poisonings, mycotoxicoses, and water quality all form part of these risks.

NQF Level 5

Knowledge

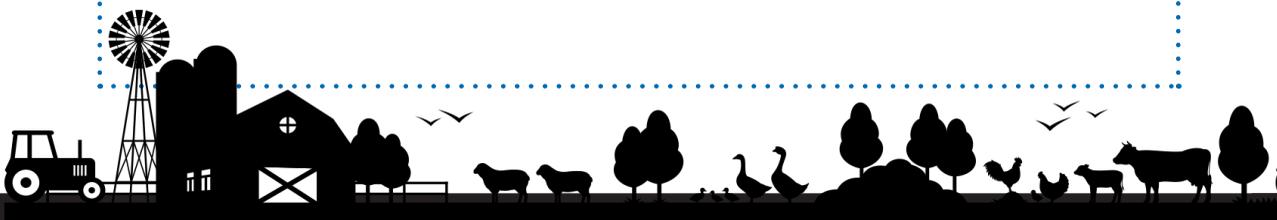
- Introduction to the concepts of cultivated pastures on South African dairy farms
- Pastures and farm planning
- Pastures and fodder flow
- Principles of grazing management
- Nutritional value of green pastures
- Health risks of dairy cattle on pastures

Practical skills

- Assess natural resources
- Develop physical aspects of pasture establishment
- Establish and maintain pastures
- Plan fodder flow and grazing programmes
- Manage nutrition of dairy animals on pastures
- Manage health risks of dairy cattle on pastures

Work experience

- Assist with and observe pasture management on a dairy farm for two weeks
- Perform pasture management activities on a dairy farm under supervision for one month
- Manage pastures on a dairy farm under normal supervisory and managerial conditions for one month



MODULE 12

Reproduction management

MANAGER MODULE



During this course students will learn to not only examine reproduction in isolation, but also as part of the entire animal and its environment. They will study the anatomy and physiology, as well as the production cycle of both the male and female animal in order to ultimately manage reproduction successfully. Critical control points that will ensure the profitability of the dairy farm include routine monitoring of reproductive performance, an efficient record-keeping system and a good veterinary-client relationship. Students also need to consider how to deal with potential complications especially during gestation, calving and the post-partum period. The course will cover metabolic diseases, infectious causes of infertility, the treatment of functional infertility, repeat breeders and heat stress, which all can have a negative effect on reproduction.

It is commonly accepted that reliable detection of cows on heat (oestrus) is the single most important factor for reproductive improvement and students will learn about the various synchronisation programmes that can be used to overcome the problems and limitations associated with visual oestrus detection. Both natural breeding and artificial insemination (AI) will be discussed. The latter is more common and the dairy industry has benefited greatly from the use of AI due to the rigorous selection of the bulls. The timing of insemination as well as important guidelines to follow during AI, such as how to handle frozen semen, will also form part of the training.

NQF Level 5



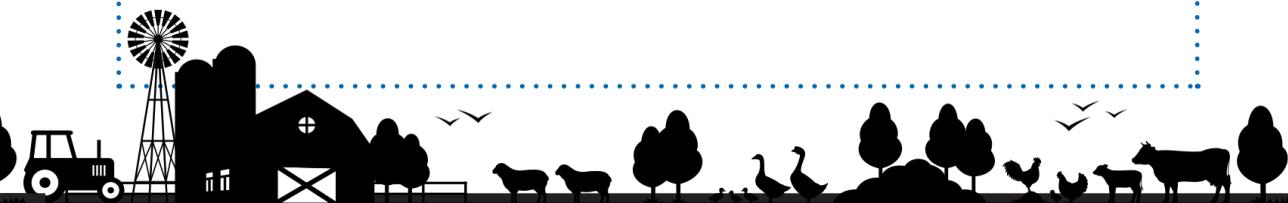
Knowledge

- Anatomy of the bovine reproductive system
- Basic reproductive physiology
- The production cycle of female and male dairy animals
- Bovine reproductive diseases and syndromes
- Reproduction management on dairy farms



Practical skills

- Work with the reproductive life cycles of dairy animals
- Manage reproduction-related risks (diseases and syndromes) on a dairy farm
- Manage reproduction-related activities on a dairy farm
- Manage the breeding programme on a dairy farm



MODULE 12

Reproduction management (Continued)

MANAGER MODULE

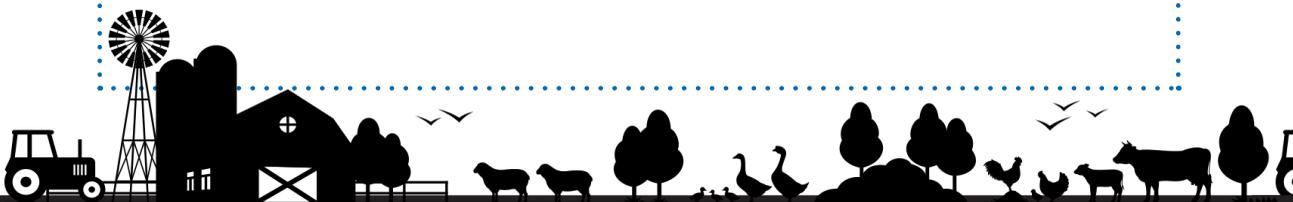


Work experience

- Assist with and observe reproduction management on a dairy farm for a period of two weeks
- Perform reproduction management activities on a dairy farm under supervision for a period of a month
- Manage reproduction on a dairy farm under normal supervisory and management conditions for a period of one month

The person will be expected to engage in the following management activities and report at meetings:

- Assessment of female and male reproductive cycles
- Health risks of female and male dairy animals, including reproductive diseases and syndromes
- Keeping and interpreting of reproduction records regarding the indices of reproductive efficiency and financial impact
- Planning nutrition and culling of dairy animals in the specific herd
- Keeping, interpreting and integrating milk-recording data regarding reproduction
- Breeding methods including natural service, artificial insemination and synchronisation
- Heat detection, including accuracy, intensity and methods to improve heat detection
- Artificial insemination, including the following: factors affecting the health condition and fertility of the cow, oestrus/heat detection, and the routine monitoring of reproductive performance.



MODULE 13

Biosecurity management

MANAGER MODULE



Biosecurity is management practices used to prevent the entry of disease-causing agents and, therefore, protects the health of the herd as well as the quality of the end product produced for the consumer. Biocontainment, on the other hand, is management practices used to prevent the spread of disease between groups of animals on a dairy farm.

During this course, students will assess the biosecurity status of the farm they work on, which will help them to identify the most prominent areas that require attention to ultimately formulate an official biosecurity plan with implementation procedures. Being able to recognise and understand all aspects of potential biosecurity breaches is essential to managing a successful biosecurity programme. There are various risks associated with dairy, and the cost of disease must be taken into account in order to improve the profitability of the dairy farm. A structured vaccination programme, as well as the training of employees regarding crucial biosecurity measures, will contribute to maintaining a healthy herd.

NQF Level 5



Knowledge

- The state of biosecurity in South Africa
- Risks associated with dairy and the cost of disease
- Basics of biosecurity regarding animals, people and programmes
- Assessment of a farm's biosecurity status
- Development of a biosecurity plan



Practical skills

- Identify and manage biosecurity risks associated with dairy
- Implement biosecurity measures regarding animals, people and programmes
- Assess the biosecurity status
- Implement and manage measures to improve biosecurity
- Develop a biosecurity plan

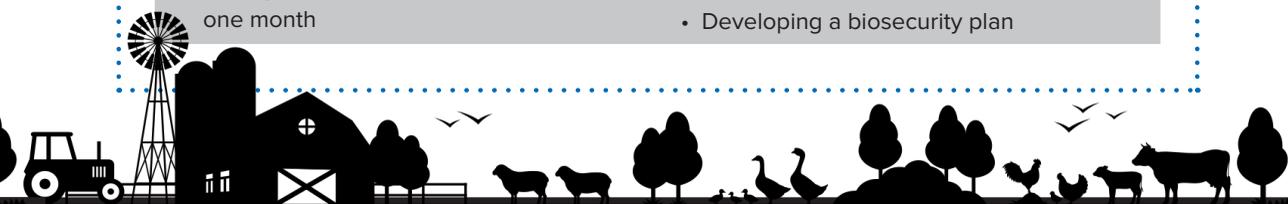


Work experience

- Assist with and observe biosecurity management on a dairy farm for a period of two weeks
- Perform biosecurity management activities on a dairy farm under supervision for a period of a month
- Manage biosecurity on a dairy farm under normal supervisory and management conditions for a period of one month

The person will be expected to engage in the following management activities and report at meetings:

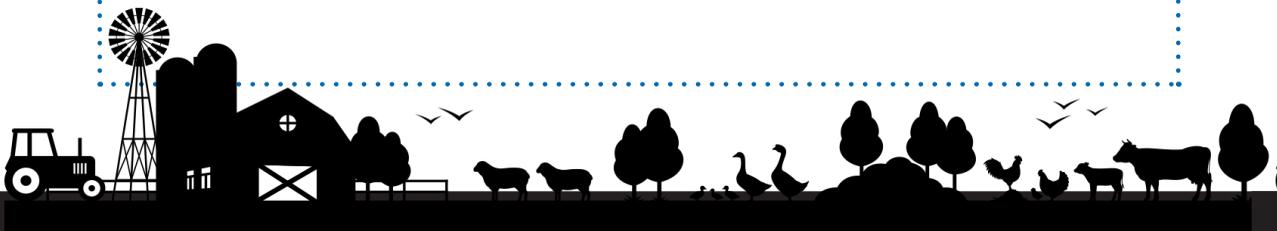
- Identifying various risks in the dairy sector
- Isolating new animals
- Testing for diseases
- Developing an immunisation programme
- Assessing the dairy farm's biosecurity status
- Developing a biosecurity plan



NOTES



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RED MEAT MANAGEMENT PROGRAMMES

BASIC HERD MANAGEMENT

BASIC HERD MANAGEMENT

The guide on basic herd management serves as a fundamental platform for increasing farmers' awareness and knowledge of the basic aspects of management required for profitable and sustainable beef farming.

- Beef breeds and herd composition
- Livestock herding and handling practices
- General husbandry practices - *dipping, branding, dehorning, hoof care, castration, condition assessment*
- Management calendar listing the best time of year certain practices are required for commercial beef herd production



HERD HEALTH MANAGEMENT

HERD HEALTH MANAGEMENT

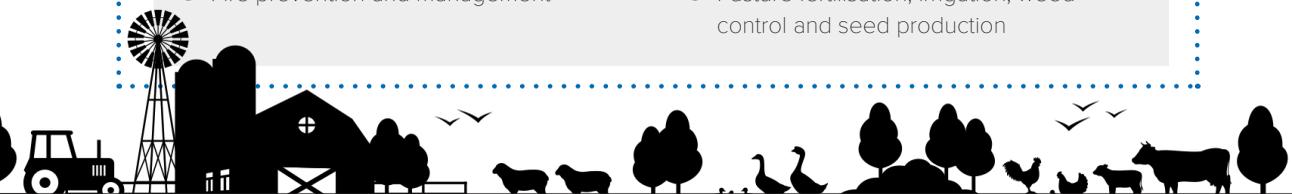
The guide on herd health aims to address the basic principles of herd health management and involves adopting a total integrated approach to production and health. Activities on the farm must ensure that healthy animals are produced under acceptable conditions for the animals and in balance with the natural resources.

- Basic principles of herd health management
- Biosecurity
- Structured observation and evaluation of sick animals
- Disease identification and treatment - *viral, bacterial, protozoal, rickettsial and fungal diseases, poisoning, injury and wound care*
- Disease prevention through vaccination
- Parasite control
- Udder health

VELD AND PASTURE MANAGEMENT

This guide focuses on several principles and practices related to veld management, which gives farmers ample information to effectively manage their environment.

- Veld management and related legislation
- Natural resources – soil, vegetation, natural veld and bioclimate
- Ecological processes, principles and disturbances
- Land degradation and soil erosion
- Plant succession
- The role of plants and animals
- Fire prevention and management
- Drought management
- Mapping and planning property
- Assessing and monitoring veld conditions
- Grazing systems
- Controlling unwanted plants
- Fodder flow planning
- Supplement feeding
- Pasture types and characteristics
- Pasture fertilisation, irrigation, weed control and seed production



REPRODUCTION MANAGEMENT

This guide focuses on several principles and practices related to veld management, which gives farmers ample information to effectively manage their environment.

- Basic anatomy of genital systems
- Basic physiology of reproduction
- Production cycle
- Bovine reproductive diseases and syndromes
- Natural breeding
- South African breeding seasons
- Managing reproduction in multiparous beef cows and beef heifers
- Bull selection, assessment and management
- Artificial breeding and oestrus synchronisation
- Embryo transfers and genomics



CATTLE MARKETING MANAGEMENT

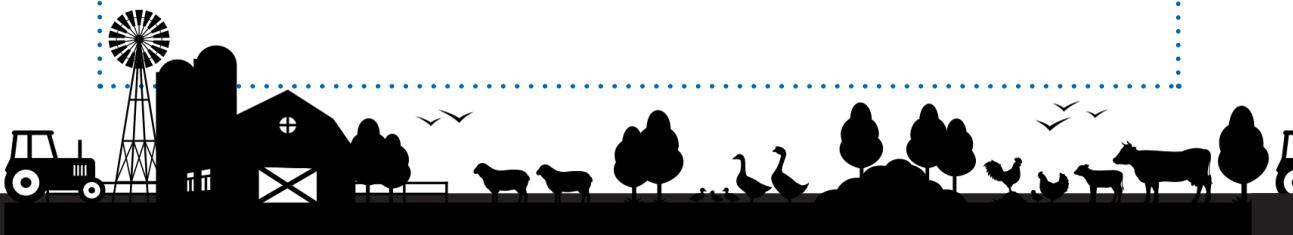
Beef consumption is predicted to increase by around 3% each year for the next decade. Therefore, it is important for farmers to be aware of the various ways in which they can market their cattle in order to achieve the highest possible profit.

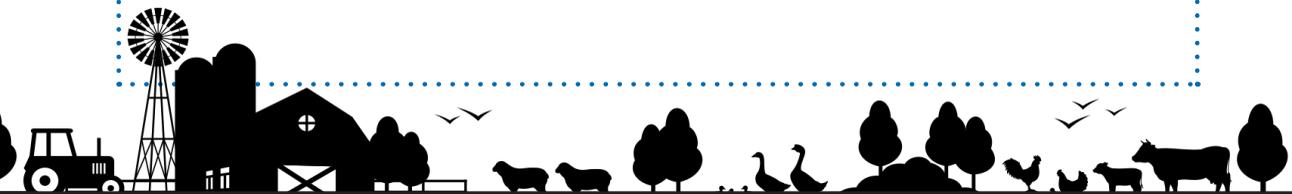
- The South African beef classification system
- Guideline for age determination of the live animal
- Hides and offal
- Marketing options – auction sales, out of hand selling, direct abattoir sales, feedlot marketing and informal marketing
- Livestock marketing guidelines and documentation
- Procedures for transporting the animals

FARM BUSINESS (FINANCIAL) MANAGEMENT

Financial management is a major cause of business failure. Therefore, this programme will help livestock farmers to improve their financial business management skills to ultimately improve productivity, increase profitability and fulfill their long-term farming goals.

- Financial strategy and planning
- Capital and funding options
- Business cost and financial viability
- Budgeting
- Analysing accounts and financial statements
- Business risk and risk mitigation







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